Part No. 308224-B Rev 00
January 2000

4401 Great America Parkway
Santa Clara, CA 95054

Installing and Operating the Passport 2430 Multiservice Access Switch

NORTEL NETWORKS™

Copyright © 2000 Nortel Networks

All rights reserved. Printed in the USA. January 2000.

The information in this document is subject to change without notice. The statements, configurations, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to Nortel Networks NA Inc.

The software described in this document is furnished under a license agreement and may only be used in accordance with the terms of that license. A summary of the Software License is included in this document.

Trademarks

NORTEL NETWORKS is a trademark of Nortel Networks.

Bay Networks is a registered trademark and Advanced Remote Node, ANH, ARN, ASN, BayRS, BCC, and Passport are trademarks of Nortel Networks.

Microsoft, MS, MS-DOS, Win32, Windows, and Windows NT are registered trademarks of Microsoft Corporation.

All other trademarks and registered trademarks are the property of their respective owners.

Statement of Conditions

In the interest of improving internal design, operational function, and/or reliability, Nortel Networks NA Inc. reserves the right to make changes to the products described in this document without notice.

Nortel Networks NA Inc. does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

USA Requirements Only

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

European Requirements Only

EN 55 022 Statement

This is to certify that the Nortel Networks Passport 2430 Multiservice Access Switch is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 022 Class A (CISPR 22).

Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take appropriate measures.

Achtung: Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

Attention: Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l’utilisateur de prendre les mesures spécifiques appropriées.

To maintain compliance with FCC radio frequency emission limits, shielded cables are required to connect equipment to other Class A certified devices and the use of quadshield, RG-6/U type CATV cable is required for connection to the CATV system. Any changes or modifications may void the user's authorization to operate this equipment.

EC Declaration of Conformity

This product conforms to the provisions of Council Directive 89/336/EEC and 73/23/EEC. The Declaration of Conformity is available on the Nortel Networks World Wide Web site at *http://libra2.corpwest.baynetworks.com/cgi-bin/ndCGI.exe/DocView/*.

Japan/Nippon Requirements Only

Voluntary Control Council for Interference (VCCI) Statement

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Taiwan Requirements

Bureau of Standards, Metrology and Inspection (BSMI) Statement

警告使用者:

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策.

Canada Requirements Only

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Passport 2430 Multiservice Access Switch) does not exceed the Class A limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Passport 2430 Multiservice Access Switch) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

Canada CS-03 Rules and Regulations

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent the degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Notice: For equipment using loopstart lines, please note that the Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5. The REN is located on the "FCC Rules Part 68" label located on the bracket of the module, or on the back of the unit.

Canada CS-03 -- Règles et règlements

Avis: L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur. L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

Avis: Veuillez prendre note que pour tout appareillage supportant des lignes de type "loopstart," l'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface. La terminaison d'une interface téléphonique peut consister en une combinaison de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5. Le REN figure sur l'étiquette "FCC Rules Part 68" située sur le support du module ou à l'arrière de l'unité.

FCC Part 68 Compliance Statement

This equipment complies with Part 68 of FCC Rules. All direct connections to telephone network lines must be made using standard plugs and jacks compliant with FCC Part 68. Please note the following:

1. You are required to request service from the telephone company before you connect the unit to a network. When you request service, you must provide the telephone company with the following data:

   - When you request T1 Service, you must provide the telephone company with
     -- The Facility Interface Code

        Provide the telephone company with all the codes below:

        - 04DU9-BN (1.544 MB, D4 framing format)
        - 04DU9-DN (1.544 MB, D4 framing format with B8ZF coding)
        - 04DU9-1KN (1.544 MB, ESF framing format)
        - 04DU9-1SN (1.544 MB, ESF framing format with B8ZF coding)
        - 04DU9-1ZN (1.544 MB, ANSI ESF and ZBTSI without line power)

        The telephone company will select the code it has available.

     -- The Service Order Code(s) (SOC): 6.0F

     -- The required Universal Service Order Code (USOC) jack: RJ48C

   - When you request 56K/64K Service, you must provide the telephone company with
     -- The Facility Interface Code: 04DU5-56/64

     -- The Service Order Code(s) (SOC): 6.0F

     -- The required Universal Service Order Code (USOC) jack: RJ48S

   - When you request V.34 Service, you must provide the telephone company with
     -- The required Universal Service Order Code (USOC) jack: RJ11C

     -- The make, model number, Ringer Equivalence Number (REN), and FCC Registration number of the unit

     The REN helps you determine the number of devices you can connect to your telephone line and still have all of those devices ring when your number is called. In most, but not all, areas, the sum of the RENs of all devices should not exceed 5.0. To be certain of the number of devices you can connect to your line, you should call your local telephone company to determine the maximum REN for your calling area. This equipment must not be used on party lines or coin lines.

   - When you request ISDN “U” Interface Service, you must provide the telephone company with
     -- The Facility Interface Code: 02IS5

     -- The Service Order Code(s) (SOC): 6.0F

     -- The required Universal Service Order Code (USOC) jack: RJ49C

   - When you request ISDN “S/T” Interface Service, you must provide the telephone company with
     -- The Service Order Code(s) (SOC): 6.0N

     -- The make, model number, and FCC Registration number of the NT1

     Note: ISDN S/T cannot be directly connected to the network.

- When you request Primary Rate ISDN Service, you must provide the telephone company with
  - -- The Facility Interface Code: 04DU9-1SN (1.544 MB, ESF framing format with B8ZF coding)
  - -- The Service Order Code(s) (SOC): 6.0F
  - -- The required Universal Service Order Code (USOC) jack: RJ48C

2. Your telephone company may make changes to its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. The telephone company will notify you in advance of such changes to give you an opportunity to maintain uninterrupted telephone service.
3. If the unit causes harm to the telephone network, the telephone company may temporarily discontinue your service. If possible, they will notify you in advance, but if advance notice is not practical, you will be notified as soon as possible and will be informed of your right to file a complaint with the FCC.
4. If you experience trouble with the unit, please contact the Nortel Networks Technical Solutions Center in your area for service or repairs. Repairs should be performed only by service personnel authorized by Nortel Networks.

United States	1-800-2LANWAN
Valbonne, France	33-4-92-96-69-68
Sydney, Australia	61-2-9927-8800
Tokyo, Japan	81-3-5740-1700

5. You are required to notify the telephone company when you disconnect the unit from the network.

Nortel Networks NA Inc. Software License Agreement

NOTICE: Please carefully read this license agreement before copying or using the accompanying software or installing the hardware unit with pre-enabled software (each of which is referred to as “Software” in this Agreement). BY COPYING OR USING THE SOFTWARE, YOU ACCEPT ALL OF THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT. THE TERMS EXPRESSED IN THIS AGREEMENT ARE THE ONLY TERMS UNDER WHICH NORTEL NETWORKS WILL PERMIT YOU TO USE THE SOFTWARE. If you do not accept these terms and conditions, return the product, unused and in the original shipping container, within 30 days of purchase to obtain a credit for the full purchase price.

1. License Grant. Nortel Networks NA Inc. (“Nortel Networks”) grants the end user of the Software (“Licensee”) a personal, nonexclusive, nontransferable license: a) to use the Software either on a single computer or, if applicable, on a single authorized device identified by host ID, for which it was originally acquired; b) to copy the Software solely for backup purposes in support of authorized use of the Software; and c) to use and copy the associated user manual solely in support of authorized use of the Software by Licensee. This license applies to the Software only and does not extend to Nortel Networks Agent software or other Nortel Networks software products. Nortel Networks Agent software or other Nortel Networks software products are licensed for use under the terms of the applicable Nortel Networks NA Inc. Software License Agreement that accompanies such software and upon payment by the end user of the applicable license fees for such software.

2. Restrictions on use; reservation of rights. The Software and user manuals are protected under copyright laws. Nortel Networks and/or its licensors retain all title and ownership in both the Software and user manuals, including any revisions made by Nortel Networks or its licensors. The copyright notice must be reproduced and included with any copy of any portion of the Software or user manuals. Licensee may not modify, translate, decompile, disassemble, use for any competitive analysis, reverse engineer, distribute, or create derivative works from the Software or user manuals or any copy, in whole or in part. Except as expressly provided in this Agreement, Licensee may not copy or transfer the Software or user manuals, in whole or in part. The Software and user manuals embody Nortel Networks’ and its licensors’ confidential and proprietary intellectual property. Licensee shall not sublicense, assign, or otherwise disclose to any third party the Software, or any information about the operation, design, performance, or implementation of the Software and user manuals that is confidential to Nortel Networks and its licensors; however, Licensee may grant permission to its consultants, subcontractors, and agents to use the Software at Licensee’s facility, provided they have agreed to use the Software only in accordance with the terms of this license.

3. Limited warranty. Nortel Networks warrants each item of Software, as delivered by Nortel Networks and properly installed and operated on Nortel Networks hardware or other equipment it is originally licensed for, to function substantially as described in its accompanying user manual during its warranty period, which begins on the date Software is first shipped to Licensee. If any item of Software fails to so function during its warranty period, as the sole remedy Nortel Networks will at its discretion provide a suitable fix, patch, or workaround for the problem that may be included in a future Software release. Nortel Networks further warrants to Licensee that the media on which the Software is provided will be free from defects in materials and workmanship under normal use for a period of 90 days from the date Software is first shipped to Licensee. Nortel Networks will replace defective media at no charge if it is returned to Nortel Networks during the warranty period along with proof of the date of shipment. This warranty does not apply if the media has been damaged as a result of accident, misuse, or abuse. The Licensee assumes all responsibility for selection of the Software to achieve Licensee's intended results and for the installation, use, and results obtained from the Software. Nortel Networks does not warrant a) that the functions contained in the software will meet the Licensee's requirements, b) that the Software will operate in the hardware or software combinations that the Licensee may select, c) that the operation of the Software will be uninterrupted or error free, or d) that all defects in the operation of the Software will be corrected. Nortel Networks is not obligated to remedy any Software defect that cannot be reproduced with the latest Software release. These warranties do not apply to the Software if it has been (i) altered, except by Nortel Networks or in accordance with its instructions; (ii) used in conjunction with another vendor's product, resulting in the defect; or (iii) damaged by improper environment, abuse, misuse, accident, or negligence. THE FOREGOING WARRANTIES AND LIMITATIONS ARE EXCLUSIVE REMEDIES AND ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Licensee is responsible for the security of its own data and information and for maintaining adequate procedures apart from the Software to reconstruct lost or altered files, data, or programs.

4. Limitation of liability. IN NO EVENT WILL NORTEL NETWORKS OR ITS LICENSORS BE LIABLE FOR ANY COST OF SUBSTITUTE PROCUREMENT; SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES; OR ANY DAMAGES RESULTING FROM INACCURATE OR LOST DATA OR LOSS OF USE OR PROFITS ARISING OUT OF OR IN CONNECTION WITH THE PERFORMANCE OF THE SOFTWARE, EVEN IF NORTEL NETWORKS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE LIABILITY OF NORTEL NETWORKS RELATING TO THE SOFTWARE OR THIS AGREEMENT EXCEED THE PRICE PAID TO NORTEL NETWORKS FOR THE SOFTWARE LICENSE.

5. Government Licensees. This provision applies to all Software and documentation acquired directly or indirectly by or on behalf of the United States Government. The Software and documentation are commercial products, licensed on the open market at market prices, and were developed entirely at private expense and without the use of any U.S. Government funds. The license to the U.S. Government is granted only with restricted rights, and use, duplication, or disclosure by the U.S. Government is subject to the restrictions set forth in subparagraph (c)(1) of the Commercial Computer Software—Restricted Rights clause of FAR 52.227-19 and the limitations set out in this license for civilian agencies, and subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause of DFARS 252.227-7013, for agencies of the Department of Defense or their successors, whichever is applicable.

6. Use of Software in the European Community. This provision applies to all Software acquired for use within the European Community. If Licensee uses the Software within a country in the European Community, the Software Directive enacted by the Council of European Communities Directive dated 14 May, 1991, will apply to the examination of the Software to facilitate interoperability. Licensee agrees to notify Nortel Networks of any such intended examination of the Software and may procure support and assistance from Nortel Networks.

7. Term and termination. This license is effective until terminated; however, all of the restrictions with respect to Nortel Networks' copyright in the Software and user manuals will cease being effective at the date of expiration of the Nortel Networks copyright; those restrictions relating to use and disclosure of Nortel Networks' confidential information shall continue in effect. Licensee may terminate this license at any time. The license will automatically terminate if Licensee fails to comply with any of the terms and conditions of the license. Upon termination for any reason, Licensee will immediately destroy or return to Nortel Networks the Software, user manuals, and all copies. Nortel Networks is not liable to Licensee for damages in any form solely by reason of the termination of this license.

8. Export and Re-export. Licensee agrees not to export, directly or indirectly, the Software or related technical data or information without first obtaining any required export licenses or other governmental approvals. Without limiting the foregoing, Licensee, on behalf of itself and its subsidiaries and affiliates, agrees that it will not, without first obtaining all export licenses and approvals required by the U.S. Government: (i) export, re-export, transfer, or divert any such Software or technical data, or any direct product thereof, to any country to which such exports or re-exports are restricted or embargoed under United States export control laws and regulations, or to any national or resident of such restricted or embargoed countries; or (ii) provide the Software or related technical data or information to any military end user or for any military end use, including the design, development, or production of any chemical, nuclear, or biological weapons.

9. General. If any provision of this Agreement is held to be invalid or unenforceable by a court of competent jurisdiction, the remainder of the provisions of this Agreement shall remain in full force and effect. This Agreement will be governed by the laws of the state of California.

Should you have any questions concerning this Agreement, contact Nortel Networks, 4401 Great America Parkway, P.O. Box 58185, Santa Clara, California 95054-8185.

LICENSEE ACKNOWLEDGES THAT LICENSEE HAS READ THIS AGREEMENT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS. LICENSEE FURTHER AGREES THAT THIS AGREEMENT IS THE ENTIRE AND EXCLUSIVE AGREEMENT BETWEEN NORTEL NETWORKS AND LICENSEE, WHICH SUPERSEDES ALL PRIOR ORAL AND WRITTEN AGREEMENTS AND COMMUNICATIONS BETWEEN THE PARTIES PERTAINING TO THE SUBJECT MATTER OF THIS AGREEMENT. NO DIFFERENT OR ADDITIONAL TERMS WILL BE ENFORCEABLE AGAINST NORTEL NETWORKS UNLESS NORTEL NETWORKS GIVES ITS EXPRESS WRITTEN CONSENT, INCLUDING AN EXPRESS WAIVER OF THE TERMS OF THIS AGREEMENT.

Contents

Preface

Before You Begin xix
Text Conventions xx
Acronyms xxi
Hard-Copy Technical Manuals xxii
How to Get Help xxiii

Chapter 1
Installing the Passport 2430 Chassis

The Passport 2430 1-2
Preparing to Install the Passport 2430 1-3
Verifying Shipment Contents 1-3
Wall Mount Kit 1-5
Shelf Kit 1-6
Additional Equipment 1-8
Tools 1-8
Cables 1-8
Management Console 1-8
Verifying Site Requirements 1-9
Installing the Passport 2430 on a Flat Surface 1-9
Wall-Mounting the Passport 2430 1-10
Hanging the Wall Bracket 1-10
Hanging the Passport 2430 1-13
Mounting the Passport 2430 in an Equipment Rack 1-15
Installing a Shelf in an Equipment Rack 1-15
Installing the Passport 2430 on the Shelf 1-18
Connecting to the LAN 1-20

Connecting a Management Console 1-20
Connecting a PC Console 1-20
Connecting a Terminal Console 1-22
Connecting the External Power Supply 1-24
Where to Go Next 1-25

Chapter 2
Installing Passport 2430 Components

PCMCIA Flash Memory Card 2-1
Installing the Flash Memory Card 2-2
PCMCIA Modem Card 2-3
Installing a Modem Card 2-4
WAN Adapter Module 2-6
Installing a WAN Adapter Module 2-7
Where to Go Next 2-11

Chapter 3
Starting the Passport 2430 for the First Time

Understanding the Startup Process 3-1
Starting the Passport 2430 3-2
Accessing a Command-Line Interface 3-3
Running the Quick-Start Script 3-3
Where to Go Next 3-6

Chapter 4
Operating the Passport 2430

Understanding the LEDs 4-1
Passport 2430 LEDs 4-2
LED on the Front of the Passport 2430 4-2
LEDs on the Back of the Passport 2430 4-2
Diagnostic LEDs 4-3
LAN Interface LEDs 4-4
Verifying a Successful Installation 4-4
Diagnostic Software 4-5
Enabling and Disabling Diagnostic Software 4-7

Turning the Power On and Off 4-8
Replacing a Flash Memory Card 4-9
Protecting Flash Memory Card Files 4-11
Securing the Passport 2430 4-12

Chapter 5
Adding and Replacing a WAN Adapter Module

Downloading New Boot and Diagnostic Code 5-1
Preparing to Install the WAN Adapter Module 5-2
Removing the Filler Panel 5-4
Removing a WAN Adapter Module 5-5
Installing a WAN Adapter Module 5-6

Chapter 6
Replacing a PCMCIA Modem Card

Removing a Modem Card 6-2
Installing a Modem Card 6-3
Modem Card Support 6-5

Chapter 7
Upgrading Memory

Installing the SIMM 7-1
Turn Off the Passport 2430 7-2
Remove the Cover from the Chassis 7-3
Removing a SIMM 7-5
Inserting a SIMM 7-6
Replacing the Chassis Cover 7-7
Starting the Passport 2430 7-7

Appendix A
Passport 2430 Technical Specifications

Physical Specifications A-1
Electrical Specifications A-3
Environmental Specifications A-3
Hardware Communications Options A-4
Ethernet 10/100BASE-TX Interface A-5
Serial Interfaces A-6

Appendix B
Quick-Start Worksheets

Understanding Quick-Start Connector Names and Numbers B-2
Filling Out the Worksheets B-2
Global Information Worksheet B-3
Router Protocol Worksheets B-5
RIP Worksheet B-6
OSPF Worksheet B-7
Static Route Worksheet B-10
WAN Protocol Worksheets B-11
Frame Relay Worksheet B-11
PPP Standard Worksheet B-12
Nortel Networks Proprietary PPP Worksheet B-14
SMDS Worksheet B-15

Index

Figures

Figure 1-1. Passport 2430 with Components Installed 1-2
Figure 1-2. Items in the Passport 2430 Shipping Container 1-4
Figure 1-3. Items in the Wall Mount Kit Shipping Container 1-5
Figure 1-4. Items in the Shelf Kit 1-7
Figure 1-5. Wall Bracket 1-10
Figure 1-6. Leveling the Wall Bracket 1-11
Figure 1-7. Attaching the Wall Bracket 1-12
Figure 1-8. Mounting Slots on the Passport 2430 1-13
Figure 1-9. Aligning the Mounting Slots 1-14
Figure 1-10. Positioning the Shelf and the Bracket 1-15
Figure 1-11. Assembling the Shelf Unit 1-16
Figure 1-12. Installing the Shelf Unit into the Equipment Rack 1-17
Figure 1-13. Positioning the Passport 2430 1-18
Figure 1-14. Installing the Passport 2430 onto a Shelf 1-19
Figure 1-15. Connecting to the LAN 1-20
Figure 1-16. Passport 2430 Console Port 1-21
Figure 1-17. Connecting a Laptop PC to a Passport 2430 1-22
Figure 1-18. Connecting a Terminal Console to a Passport 2430 1-23
Figure 1-19. External Power Supply 1-24
Figure 1-20. Connecting the Power Supply to the Passport 2430 1-25
Figure 2-1. PCMCIA Flash Memory Card 2-1
Figure 2-2. Inserting the Flash Memory Card 2-2
Figure 2-3. Xircom RealPort Modem Card 2-3
Figure 2-4. Inserting the Modem Card 2-4
Figure 2-5. Connecting the Telephone Line to the Modem Card 2-5
Figure 2-6. WAN Adapter Module 2-6
Figure 2-7. Location of Adapter Module 1 and 2 Slots 2-7
Figure 2-8. Connecting the Wrist Strap Jack to the Metal Tab on a WAN Adapter Module 2-8

Figure 2-9. Removing the Filler Panel from the 2 WAN Adapter Module Slot 2-9
Figure 2-10. WAN Adapter Module Ready for Installation 2-10
Figure 2-11. Inserting the WAN Adapter Module 2-10
Figure 2-12. Securing the WAN Adapter Module to the Front Panel 2-11
Figure 3-1. Starting the IP Interface Test 3-5
Figure 4-1. LED Located on the Front of the Passport 2430 4-2
Figure 4-2. LEDs Located on the Back Panel of the Passport 2430 4-2
Figure 4-3. Diagnostic LEDs 4-3
Figure 4-4. LAN Port and Interface LEDs 4-4
Figure 4-5. Diagnostic LEDs 4-4
Figure 4-6. Power Switch 4-8
Figure 4-7. Ejecting a Passport 2430 Flash Memory Card 4-9
Figure 4-8. Inserting the Flash Memory Card 4-10
Figure 4-9. Flash Memory Card Read/Write Protect Switch 4-11
Figure 4-10. Security Slot 4-12
Figure 5-1. Connecting the Wrist Strap Jack to the Metal Tab on a WAN Adapter Module 5-3
Figure 5-2. Location of the WAN Adapter Module 1 and 2 Slots 5-3
Figure 5-3. Removing the Filler Panel from the 2 Slot 5-4
Figure 5-4. Removing the WAN Adapter Module Screw 5-5
Figure 5-5. WAN Adapter Module Ready for Installation 5-6
Figure 5-6. Inserting the WAN Adapter Module 5-6
Figure 5-7. Securing the WAN Adapter Module to the Back Panel 5-7
Figure 6-1. Xircom RealPort Modem Card 6-1
Figure 6-2. Removing a Passport 2430 Modem Card 6-2
Figure 6-3. Inserting the Modem Card 6-3
Figure 6-4. Connecting the Telephone Line to the Modem Card 6-4
Figure 7-1. Power Switch 7-2
Figure 7-2. Removing the Screws from the Passport 2430 7-3
Figure 7-3. Removing the Chassis Cover 7-4
Figure 7-4. Location of the SIMM Slot 7-4
Figure 7-5. Pull the Tabs on Either Side of the SIMM 7-5
Figure 7-6. Position and Insert the SIMM (1), then Push the SIMM Down (2) 7-6
Figure 7-7. Replacing the Chassis Cover 7-7

Tables

Table 1-1. PC Console Parameters 1-21
Table 1-2. Terminal Console Parameters 1-22
Table 2-1. Modem Defaults 2-6
Table 3-1. Quick-Start Commands 3-4
Table 4-1. Base Module Diagnostic LEDs 4-3
Table 4-2. Diagnostic Testing 4-6
Table 6-1. Modem Defaults 6-5
Table A-1. Passport 2430 Power Outlet Requirements A-3
Table A-2. Network Interfaces Available on the Passport 2430 ..... A-4
Table A-3. 10/100BASE-TX Interface Pin Assignments A-5
Table A-4. Local Console Port RJ-45 Pin Assignments A-6
Table B-1. Quick-Start Connector Names and Numbers B-2

Preface

The Passport™ 2430 mutliservice access switch, which provides a LAN connection and two slots for WAN adapter modules, supports a broad array of primary and backup connectivity options. This guide describes how to install, start, and operate the Passport 2430.

Before You Begin

This guide is intended for qualified personnel who are installing the Passport 2430 for the first time or who need to add or replace the flash memory card, WAN adapter module, or the PCMCIA modem card. A qualified person should be familiar with computer systems, computer ports, and network protocols.

Before installing the Passport 2430, ensure that all network wiring has been installed on the premises using standard cable-system practices.

Before turning on the Passport 2430 for the first time, contact your network administrator to determine which software configuration option to use.

Text Conventions

This guide uses the following text conventions:

angle brackets (< >)	Indicate that you choose the text to enter based on the description inside the brackets. Do not type the brackets when entering the command. Example: If the command syntax is: **ping** <*ip_address*>, you enter: **ping 192.32.10.12**
bold text	Indicates command names and options and text that you need to enter. Example: Enter **show ip** {**alerts** | **routes**}. Example: Use the **dinfo** command.
braces ({})	Indicate required elements in syntax descriptions where there is more than one option. You must choose only one of the options. Do not type the braces when entering the command. Example: If the command syntax is: **show ip** {**alerts** | **routes**}, you must enter either: **show ip alerts** or **show ip routes**, but not both.
brackets ([ ])	Indicate optional elements in syntax descriptions. Do not type the brackets when entering the command. Example: If the command syntax is: **show ip interfaces** [**-alerts**], you can enter either: **show ip interfaces** or **show ip interfaces -alerts**.

italic text	Indicates file and directory names, new terms, book titles, and variables in command syntax descriptions. Where a variable is two or more words, the words are connected by an underscore. Example: If the command syntax is: **show at** <*valid_route*> *valid_route* is one variable and you substitute one value for it.
`screen text`	Indicates system output, for example, prompts and system messages. Example: `Set Bay Networks Trap Monitor Filters`

Acronyms

ANSI	American National Standards Institute
ARP	Address Resolution Protocol
AUI	attachment unit interface
BRI	basic rate interface
CHAP	Challenge Handshake Authentication Protocol
CSU	channel service unit
CTS	clear to send
DCE	data communication equipment
DSU	data service unit
DTE	data terminal equipment
DTR	data terminal ready
EIA	Electronic Industries Association
FTP	File Transfer Protocol
IEEE	Institute of Electrical and Electronic Engineers
IP	Internet Protocol
ISDN	Integrated Services Digital Network

ITU-T	International Telecommunication Union-Telecommunications
LAN	local area network
LED	light emitting diode
LQR	Link Quality Report
NBMA	nonbroadcast multi-access
NEMA	National Electrical Manufacturers Association
NVFS	nonvolatile file system
OSPF	Open Shortest Path First
PAP	Password Authentication Protocol
PCMCIA	Personal Computer Memory Card International Association
PPP	Point-to-Point Protocol
PROM	programmable read-only memory
RIP	Routing Information Protocol
SMDS	Switched Multi Megabit Data Service
TFTP	Trivial File Transfer Protocol
WAN	wide area network

Hard-Copy Technical Manuals

You can print selected technical manuals and release notes free, directly from the Internet. Go to *support.baynetworks.com/library/tpubs/*. Find the product for which you need documentation. Then locate the specific category and model or version for your hardware or software product. Using Adobe Acrobat Reader, you can open the manuals and release notes, search for the sections you need, and print them on most standard printers. You can download Acrobat Reader free from the Adobe Systems Web site, *www.adobe.com*.

You can purchase selected documentation sets, CDs, and technical publications through the collateral catalog. The catalog is located on the World Wide Web at *support.baynetworks.com/catalog.html* and is divided into sections arranged alphabetically:

- The “CD ROMs” section lists available CDs.
- The “Guides/Books” section lists books on technical topics.
- The “Technical Manuals” section lists available printed documentation sets.

How to Get Help

If you purchased a service contract for your Nortel Networks™ product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

If you purchased a Nortel Networks service program, contact one of the following Nortel Networks Technical Solutions Centers:

Technical Solutions Center	Telephone Number
Billerica, MA	800-2LANWAN (800-252-6926)
Santa Clara, CA	800-2LANWAN (800-252-6926)
Valbonne, France	33-4-92-96-69-68
Sydney, Australia	61-2-9927-8800
Tokyo, Japan	81-3-5740-1745

Chapter 1
Installing the Passport 2430 Chassis

This chapter describes how to install the Passport 2430 router.

Topic	Page
The Passport 2430	1-2
Preparing to Install the Passport 2430	1-3
Installing the Passport 2430 on a Flat Surface	1-9
Wall-Mounting the Passport 2430	1-10
Mounting the Passport 2430 in an Equipment Rack	1-15
Connecting to the LAN	1-20
Connecting a Management Console	1-20
Connecting the External Power Supply	1-24
Where to Go Next	1-25

Note: The installation instructions in this chapter assume that wiring is already installed on the premises using common cable system practices. Your installation procedure may differ slightly, depending on your cable system.

The Passport 2430

Figure 1-1 shows a Passport 2430 router with the following components installed:

- PCMCIA flash memory card
- PCMCIA modem card
- Two WAN adapter modules

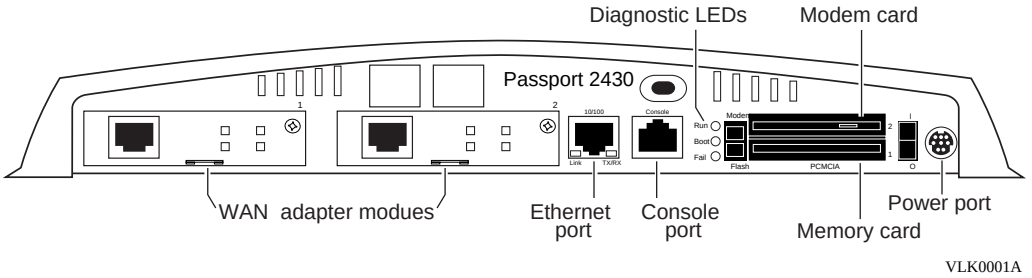


Figure 1-1. Passport 2430 with Components Installed

The following sections describe how to install the chassis on the premises and connect the:

- LAN
- Console
- Power supply

Chapter 2 describes how to install the:

- PCMCIA flash memory card
- PCMCIA modem card
- WAN adapter module

Preparing to Install the Passport 2430

Verify the following before beginning the installation, as explained in the sections that follow:

- Your shipment is complete and undamaged.
- You have the proper equipment and tools.
- Your installation site meets physical, electrical, and environmental requirements (see Appendix A, “Passport 2430 Technical Specifications”).
- You have the cabling that you need to attach to the Passport 2430.

Verifying Shipment Contents

You should inspect all items for shipping damage. If you detect any damage, do not install the Passport 2430. Call the Nortel Networks Technical Solutions Center in your area, as described in “How to Get Help” on page xxi.

In addition to the Passport 2430 and this guide, your shipping container should contain several other items. Verify that the items in the shipping container match those on the packing list affixed to the shipping container.

Refer to the following checklist and to Figure 1-2 to verify the contents of the shipping container:

_ Antistatic wrist strap

_ Power supply for Passport 2430

_ One power cord

_ One RJ-45 to DB-9 cable

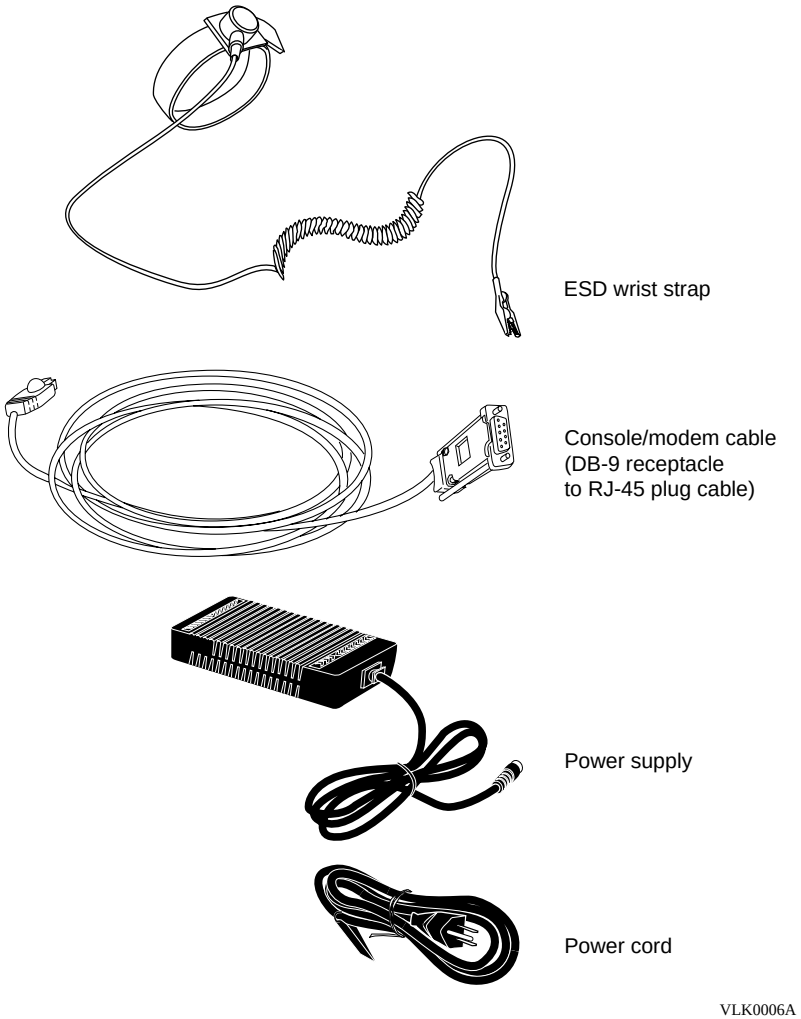


Figure 1-2. Items in the Passport 2430 Shipping Container

Wall Mount Kit

If you are mounting the Passport 2430 on a wall, you need a wall mount kit (Order No. PB0011001).

Once you have the wall mount kit, refer to the following checklist and to Figure 1-2 to verify the contents of the wall mount kit shipping container:

_ Wall bracket

_ Two #10 three-quarter-inch self-drilling, tapping Phillips pan head screws

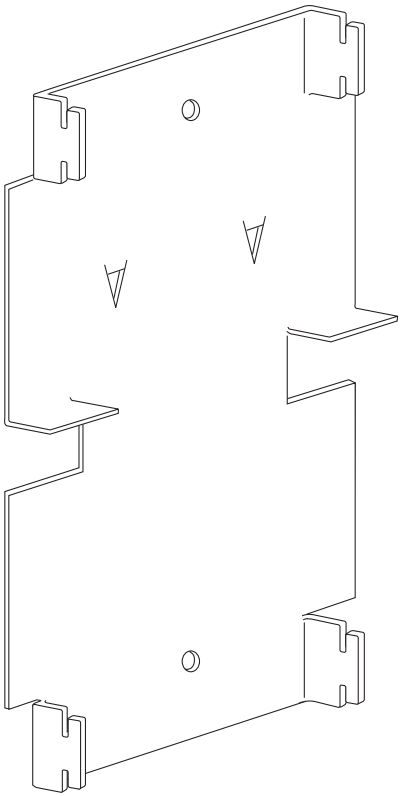


Figure 1-3. Items in the Wall Mount Kit Shipping Container

Shelf Kit

If you are mounting the Passport 2430 on a rack, you will need a shelf kit (Order No. PB0011002).

Once you have the shelf kit, refer to the following checklist and to Figure 1-4 to verify the contents of the shelf kit shipping container:

_ One shelf

_ Two brackets

_ Two #2 one-quarter-inch screws

_ Four cage nuts

_ Four cagenut screws and washers

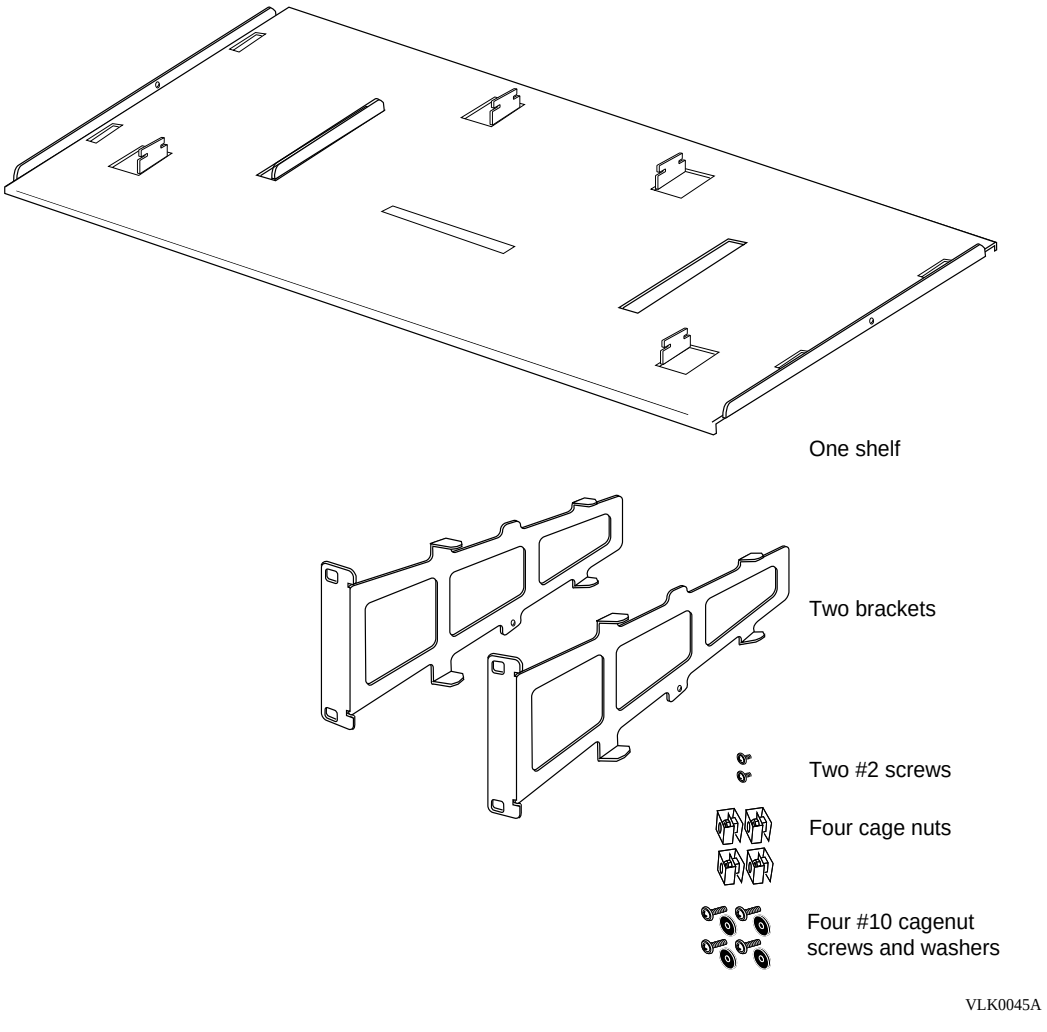


Figure 1-4. Items in the Shelf Kit

Additional Equipment

Before installing the Passport 2430 hardware, ensure that you obtain all the cables, tools, and other equipment that you need.

Tools

To install a WAN adapter you need a Phillips screwdriver to remove the filler panel.

To wall-mount the Passport 2430, you need the following tools:

- Phillips screwdriver
- Carpenter's level

To rack-mount the Passport 2430, you need a Phillips screwdriver to assemble the shelf unit and attach the shelf unit to an equipment rack.

Cables

Unless they were specifically ordered, the cables necessary for your network configuration are not part of the Passport 2430 accessory package. If you do not have the proper cables, contact your network administrator or see the *Cable Guide.*

Management Console

Before you boot the Passport 2430 for the first time, you need to attach a terminal or PC to the Passport 2430 to monitor the results of startup diagnostics and perform manual boot configurations. If you use a terminal as your management console, you need a DB-9 to DB-25 adapter to connect the router to the terminal.

After the initial start-up, you can use the PCMCIA modem for remote dial-in access to the Passport 2430.

Verifying Site Requirements

The installation site must provide 2 inches (in.) (5.1 cm) of free space above the Passport 2430 to dissipate heat.

If you are rack mounting the Passport 2430, the equipment rack should meet the following specifications:

- Heavy-duty steel construction
- Electronic Industries Association (EIA) standard hole-spacing
- Width of 19 in. (48 cm)
- Depth of 24 in. (61 cm)

In addition, the installation site must meet the electrical and environmental specifications listed in Appendix A, “Passport 2430 Technical Specifications.”

Caution: You must use grounded electrical power outlets with the Passport 2430 power source.

Installing the Passport 2430 on a Flat Surface

When you are ready to install the Passport 2430, position the router on a flat, sturdy, horizontal surface that provides:

- 2 in. (5 cm) clearance above the chassis for heat dissipation.
- Support for the combined weight of the Passport 2430, the power supply, the power cord, the LAN cable, and any WAN cables that you connect.

Wall-Mounting the Passport 2430

To wall-mount the Passport 2430, you first hang the wall bracket on the wall, then attach the Passport 2430 to the wall bracket.

Hanging the Wall Bracket

The wall bracket, shown in Figure 1-5, is a metal device with four mounting arms on which you attach the Passport 2430 (see Figure 1-5).

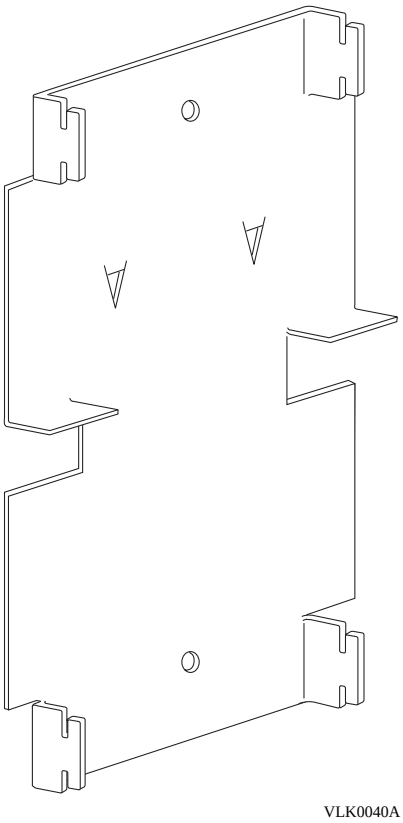
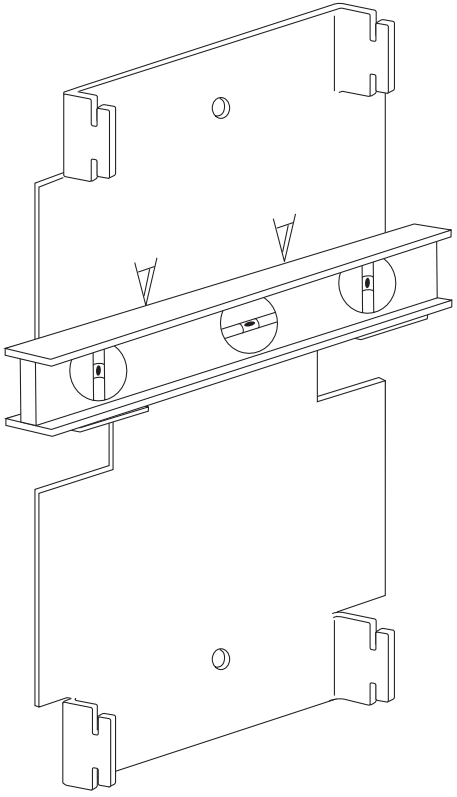


Figure 1-5. Wall Bracket

To hang the wall bracket on a wall:

1. **Determine the location you want to hang the wall bracket.**
2. **Level the wall bracket:**
   a. **Hold the bracket against the wall.**
   b. **Put the carpenter's level on the bracket arms as shown in Figure 1-6.**
   c. **Watching the carpenter's level, adjust the wall bracket until it is level.**



VLK0042A

Figure 1-6. Leveling the Wall Bracket

3. **Screw the bracket onto the wall using the 3/4 in. self-drilling pan head screws and the Phillips screwdriver (see Figure 1-7).**

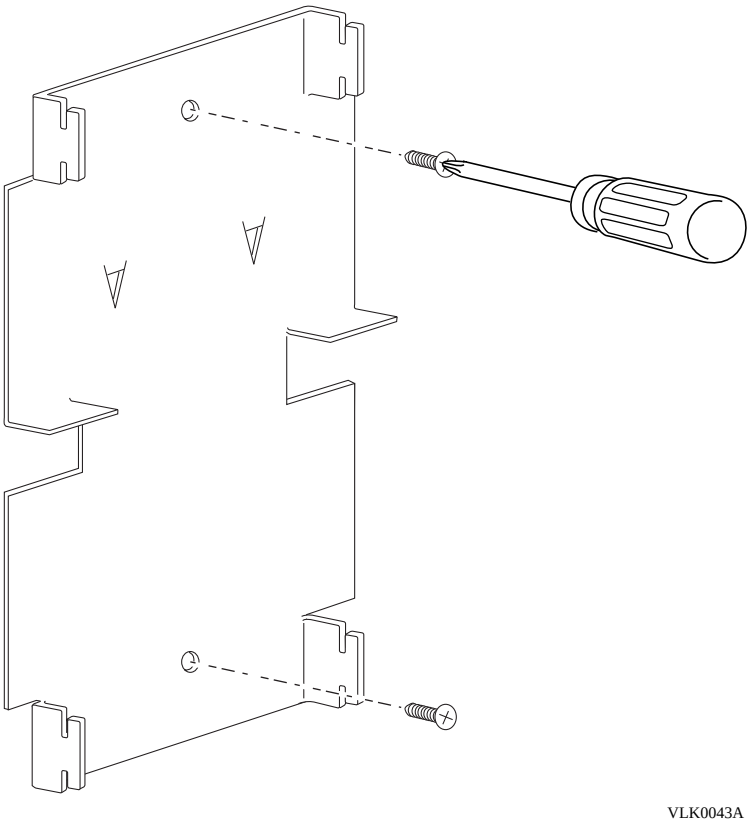


Figure 1-7. Attaching the Wall Bracket

Hanging the Passport 2430

The Passport 2430 has two mounting slots and two vents located on the bottom of the router (see Figure 1-8) that match up to the four mounting arms on the wall bracket.

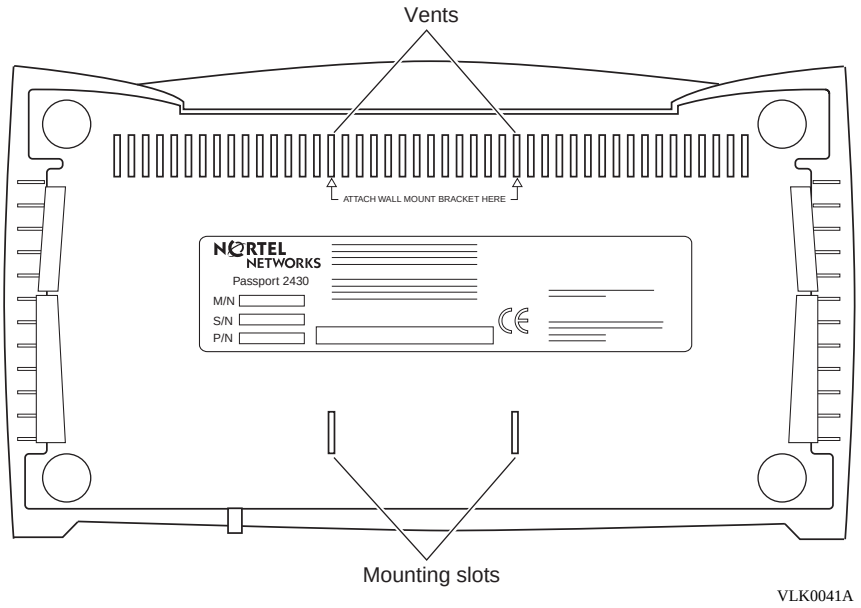


Figure 1-8. Mounting Slots on the Passport 2430

After installing the wall bracket, hang the Passport 2430 on the wall bracket:

1. **Align the mounting arms to the mounting slots on the Passport 2430 as shown in Figure 1-9.**

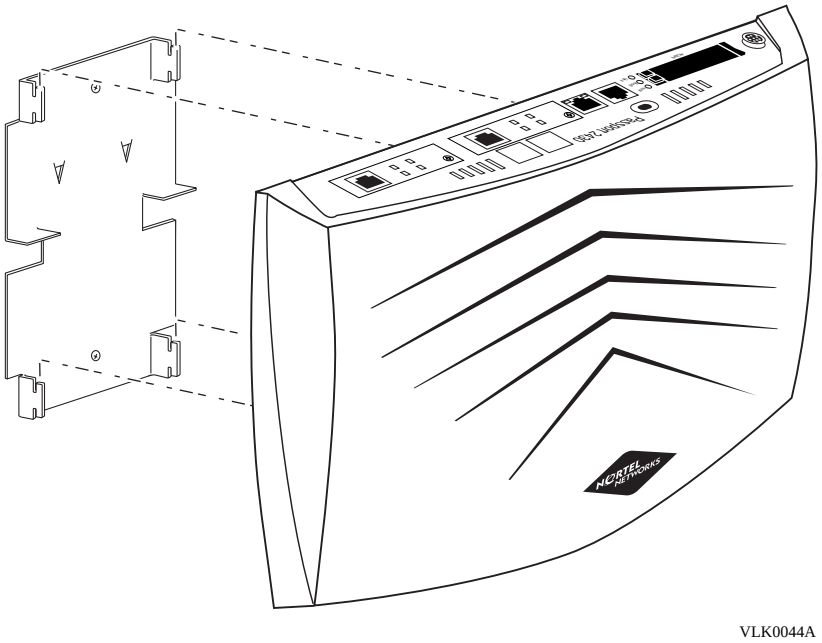


Figure 1-9. Aligning the Mounting Slots

2. **Insert the mounting arms on the bracket into the mounting slots on the Passport 2430.**

The Passport 2430 is now mounted securely on the wall.

Mounting the Passport 2430 in an Equipment Rack

To mount the Passport 2430 in an equipment rack, you first install a shelf unit in the equipment rack, then place the Passport 2430 on the shelf.

Installing a Shelf in an Equipment Rack

To install a shelf in an equipment rack:

1. **Assemble the shelf unit:**
   a. **Position the shelf and one bracket as shown in Figure 1-10.**

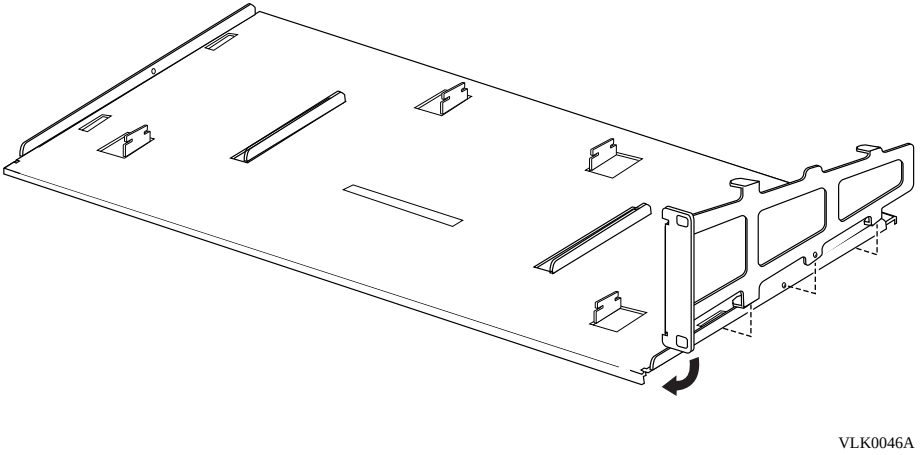


Figure 1-10. Positioning the Shelf and the Bracket

b. Slide the bracket tabs into the slots on the underside of the shelf as shown in Figure 1-11.

c. Insert a screw though the shelf and the corresponding bracket hole as shown in Figure 1-11. Tighten with a Phillips screwdriver.

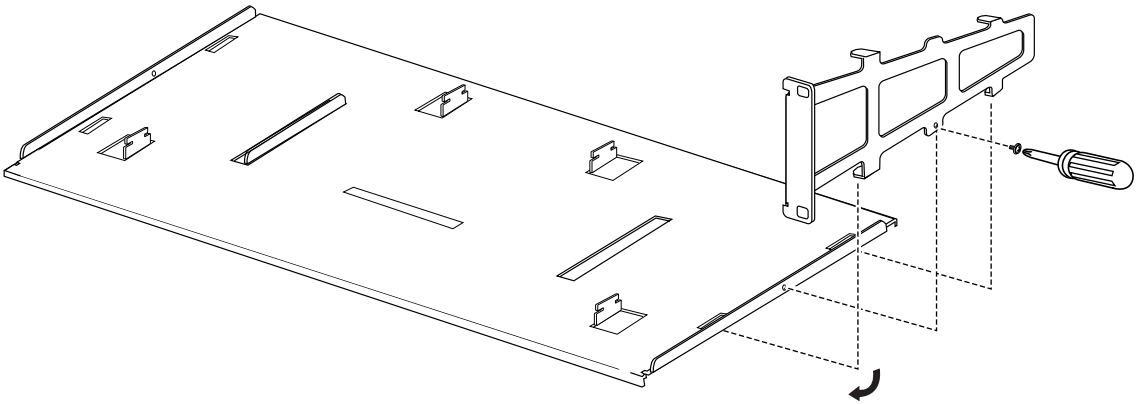


Figure 1-11. Assembling the Shelf Unit

d. Repeat steps a through c with the other bracket.

2. Attach the assembled shelf unit to the equipment rack:

a. Align the four bracket holes in the shelf unit with four holes in the equipment rack as shown in Figure 1-12.

Note: If the holes in the rack's vertical supports are not threaded for cagenut screws, insert a cage nut in the four locations.

b. Insert a cagenut screw through each bracket hole and into the corresponding holes in the rack. Tighten with a Phillips screwdriver.

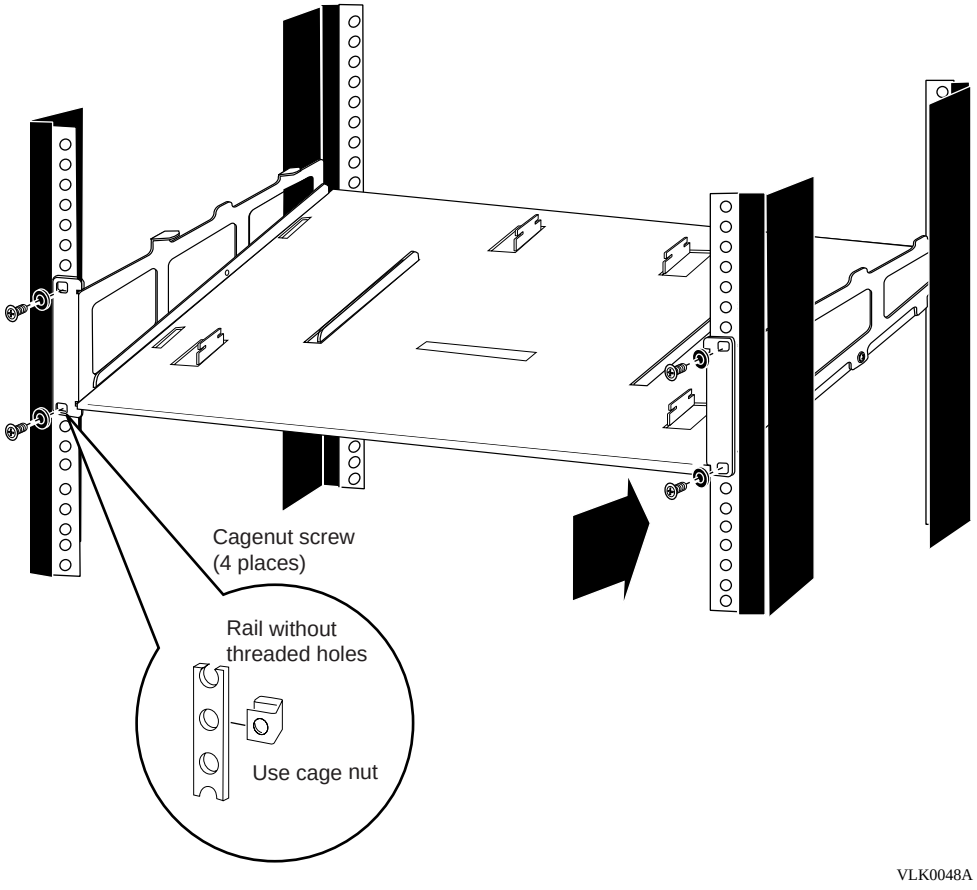


Figure 1-12. Installing the Shelf Unit into the Equipment Rack

Installing the Passport 2430 on the Shelf

Once you install the shelf unit into the electronic equipment rack, install the Passport 2430 onto the shelf:

1. **Position the router so that the mounting slots are aligned with the anchors on the shelf unit (see Figure 1-13).**

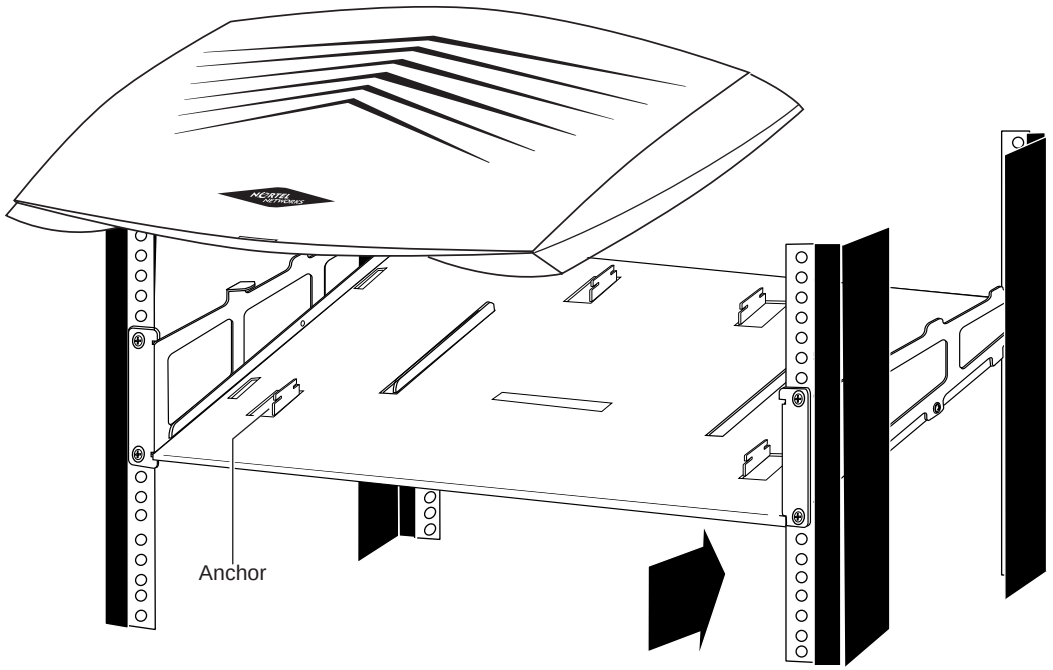


Figure 1-13. Positioning the Passport 2430

2. **Slide the Passport 2430 into the shelf, adjusting the router position until the anchors insert into the Passport 2430 mounting slots (Figure 1-14).**

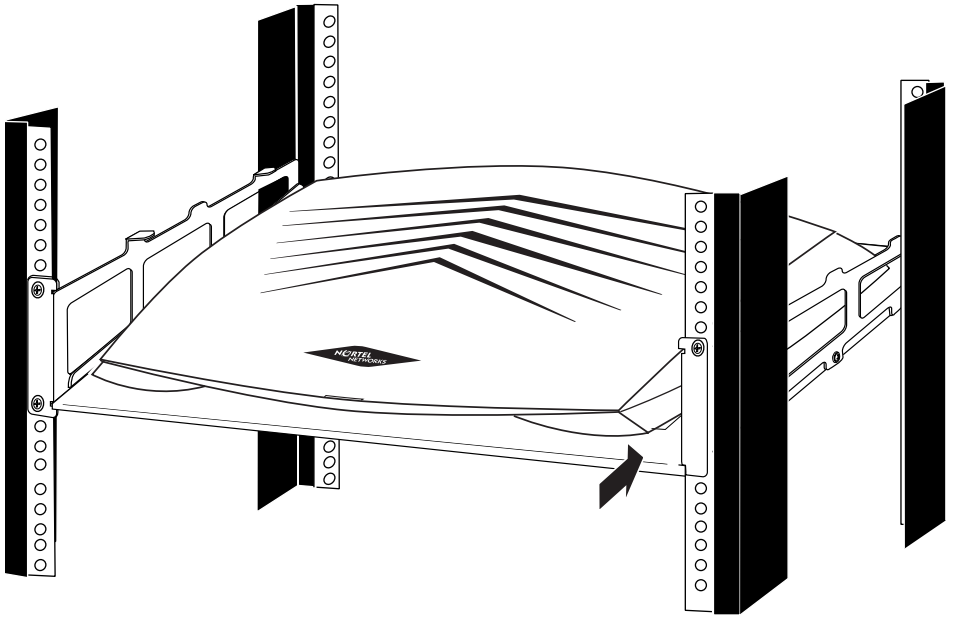


Figure 1-14. Installing the Passport 2430 onto a Shelf

The Passport 2430 is now installed securely in the equipment rack.

Connecting to the LAN

To connect the Passport 2430 to the LAN, attach the Ethernet LAN cable to the Ethernet port located on the back of the Passport 2430 (Figure 1-15).

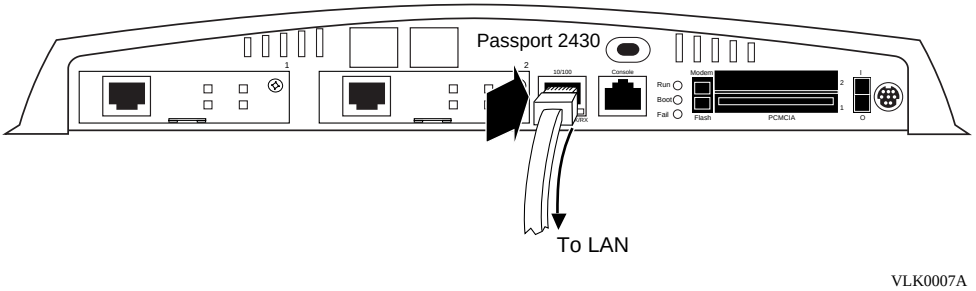


Figure 1-15. Connecting to the LAN

Warning: Connecting any other cable to the Ethernet port may seriously damage the Passport 2430.

Connecting a Management Console

To boot, configure, and manage the Passport 2430, you must connect either a PC or a terminal to the Passport 2430 to serve as the management console.

Connecting a PC Console

You can use either a desktop or laptop PC as a management console. The following instructions assume you are using a laptop PC.

Before you connect the Passport 2430 to your laptop PC make sure you have a terminal emulation program installed on your laptop PC.

To connect a laptop PC to the Passport 2430, make sure that you have the RJ-45 to DB-9 cable that was shipped with the Passport 2430, then complete the following steps:

1. **Start your terminal emulation program.**

   This sets up a dummy terminal that allows you to interface with the router's Quick-Start program.

2. **Configure the laptop PC console communication data port using the parameters in Table 1-1.**

Table 1-1. PC Console Parameters

Parameter	Value
Baud rate	9600
Data bits	8
Stop bits	1
Parity	None

   You can do this either through the terminal emulation program or the PC control panel and the instructions in your PC documentation.

3. **Insert the blue RJ-45 receptacle end of the console cable into the blue Passport 2430 Console port (Figure 1-16).**

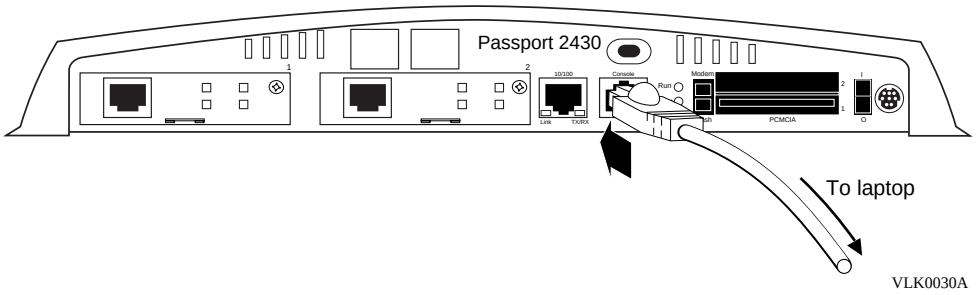


Figure 1-16. Passport 2430 Console Port

4. **Connect the DB-9 end of the cable to the communication data port on the laptop PC (Figure 1-17).**

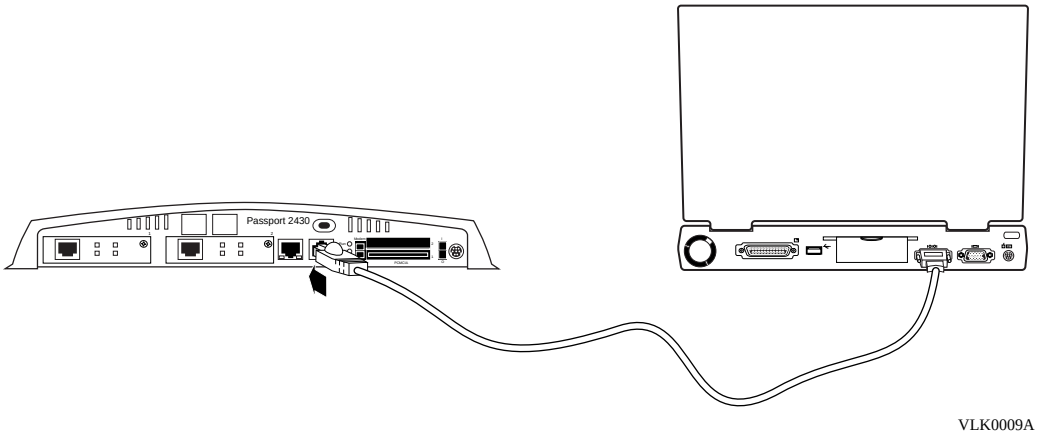


Figure 1-17. Connecting a Laptop PC to a Passport 2430

Connecting a Terminal Console

To connect a terminal console to the Passport 2430, make sure that you have the RJ-45 to DB-9 cable that was shipped with the Passport 2430 and a DB-9 to DB-25 adapter, then complete the following steps:

1. **Turn on and configure the terminal, using the parameters in Table 1-2 and the terminal user guide.**

Table 1-2. Terminal Console Parameters

Parameter	Value
Baud rate	9600
Data bits	8
Stop bits	1
Parity	None

2. **Insert the blue RJ-45 receptacle end of the console cable into the blue Passport 2430 console connector.**
3. **Attach the DB-9 receptacle connector to the DB-9 end of the adapter.**

4. **Attach the DB-25 end of the adapter to the console host connector (Figure 1-18).**

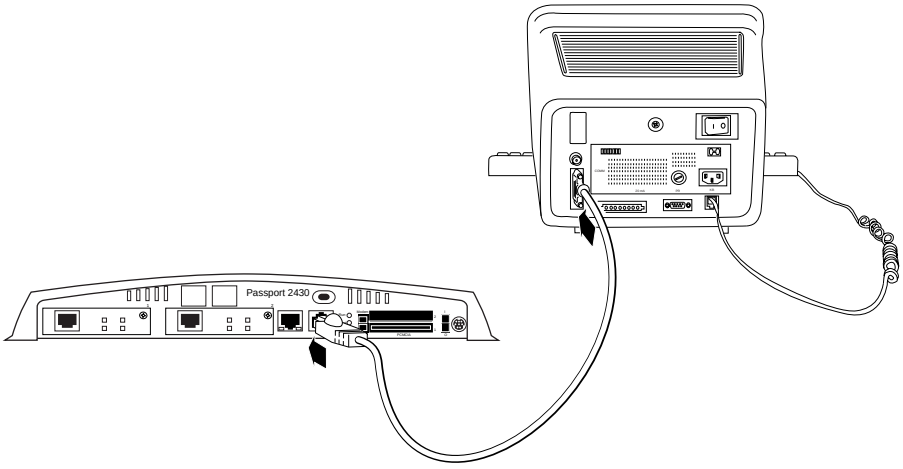


Figure 1-18. Connecting a Terminal Console to a Passport 2430

Connecting the External Power Supply

The Passport 2430 is powered by an external 12-volt (V) power supply.

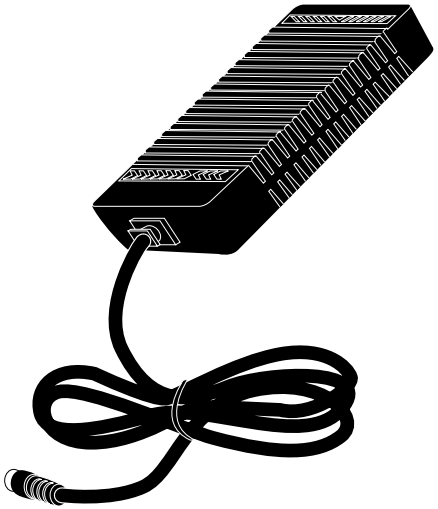


Figure 1-19. External Power Supply

Danger: Be sure that the power switch is in the OFF (0) position before you connect to the Passport 2430.

Make sure that you have the power cord that was shipped with the Passport 2430 to connect the power supply to the wall outlet.

Connect the power supply to the Passport 2430 by following these steps:

1. **Insert the end of the power supply cable to the power port on the Passport 2430 back panel (Figure 1-20).**
2. **Connect the receptacle end of the power cord to the receptacle on the power supply (Figure 1-20).**

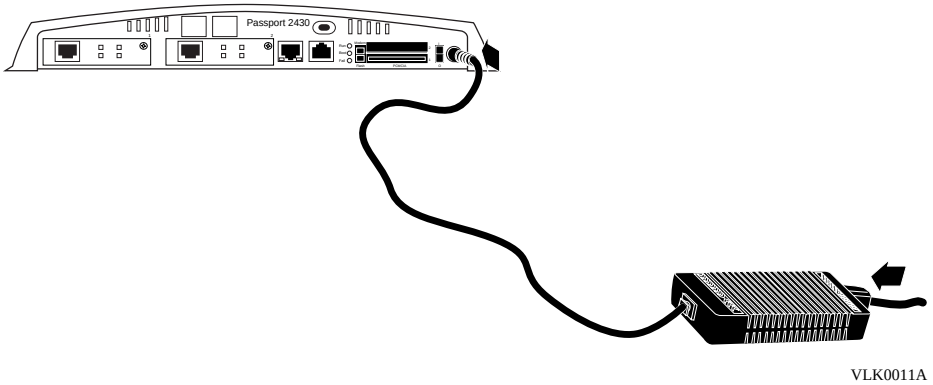


Figure 1-20. Connecting the Power Supply to the Passport 2430

3. **Connect the power cord to a grounded outlet.**

   The LEDs on the power supply light.

If the power supply LED is not lit when you plug the power supply into an outlet, there may be a problem with the power supply. If the power supply LED turns off when you turn on the Passport 2430, the router may have caused the power supply to turn off. If either of these problems occur see “How to Get Help” on page xxi.

Where to Go Next

Use the following table to determine where you want to go next.

For information about	Go to
Installing Passport 2430 Components	Chapter 2
Starting the Passport 2430 for the First Time	Chapter 3

Chapter 2
Installing Passport 2430 Components

This chapter describes how to install the Passport 2430 components.

Topic	Page
PCMCIA Flash Memory Card	2-1
PCMCIA Modem Card	2-3
WAN Adapter Module	2-6
Where to Go Next	2-11

PCMCIA Flash Memory Card

The PCMCIA flash memory card (Figure 2-1) has 16 megabytes (MB) of memory. It contains the router software and the Passport 2430 boot and diagnostic code.

Figure 2-1. PCMCIA Flash Memory Card

Installing the Flash Memory Card

Before starting the Passport 2430, install the flash memory card supplied with the router, in PCMCIA slot 1:

1. **Position the card with the label facing up and the INSERT arrow pointing toward PCMCIA slot 1.**
2. **Insert the flash memory card into PCMCIA slot 1 (Figure 2-2) and gently push the card until it fits snugly into place.**

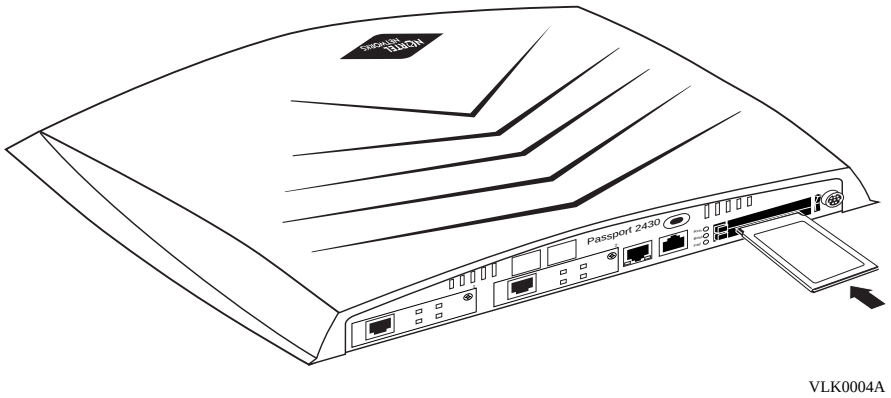


Figure 2-2. Inserting the Flash Memory Card

Note: The flash memory card can be installed only in PCMCIA slot 1. The Passport 2430 is unable to boot if you insert the flash memory card in PCMCIA slot 2.

PCMCIA Modem Card

It is a good idea for you to connect a modem to the Passport 2430. A modem provides remote access to the router for administrative purposes or in case of system problems.

Nortel Networks supports the use of the Xircom RM 56 G (Figure 2-3). This is a Type III, RealPort™ PC card and is capable of modem speeds up to 56 Kb/s.

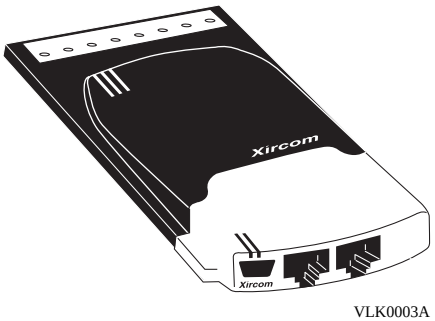


Figure 2-3. Xircom RealPort Modem Card

Note: You can also install an integrated V.34 modem in the WAN adapter slot for WAN connection and bandwidth on demand (BOD) services. However, you cannot use this modem for remote administration. To install an integrated V.34 modem, see “Installing a WAN Adapter Module” on page 2-7.

Installing a Modem Card

To install a modem card:

1. **Position the card with the label facing up and the INSERT arrow pointing toward PCMCIA slot 2.**
2. **Insert the card into PCMCIA slot 2 and gently push the card until it fits snugly into place (Figure 2-4).**

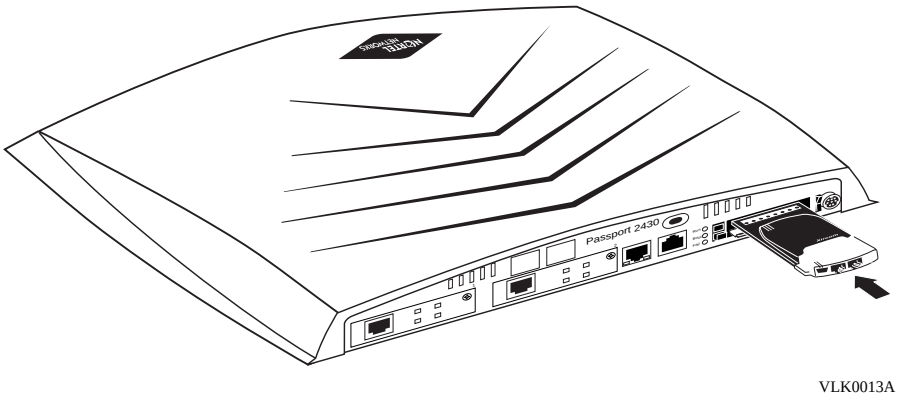


Figure 2-4. Inserting the Modem Card

Note: You must install the modem card in PCMCIA slot 2. The modem will not work if you install it in PCMCIA slot 1.

3. **Connect the RJ-11 jack from the telephone line directly to the PCMCIA modem interface (Figure 2-5).**

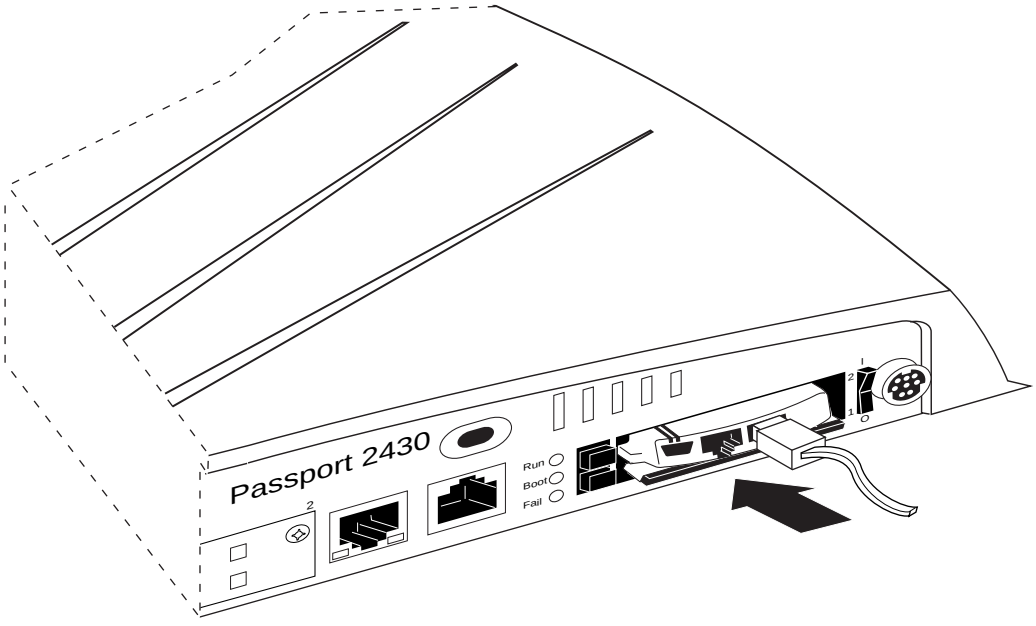


Figure 2-5. Connecting the Telephone Line to the Modem Card

Table 2-1 provides the default settings for the PCMCIA modem cards.

Table 2-1. Modem Defaults

Modem Signal/Parameter	Default Value
AutoAnswer	Answer on two rings with DTR active
Local character echo	Off
Supervisory functions	Off
Baud rate	9600
Data bits	8
Stop bits	1
Parity	None

WAN Adapter Module

The WAN adapter modules (Figure 2-6) support protocols including Synchronous, Point-to-Point Protocol (PPP), frame relay, ISDN, and Switched Multimegabit Data Services (SMDS).

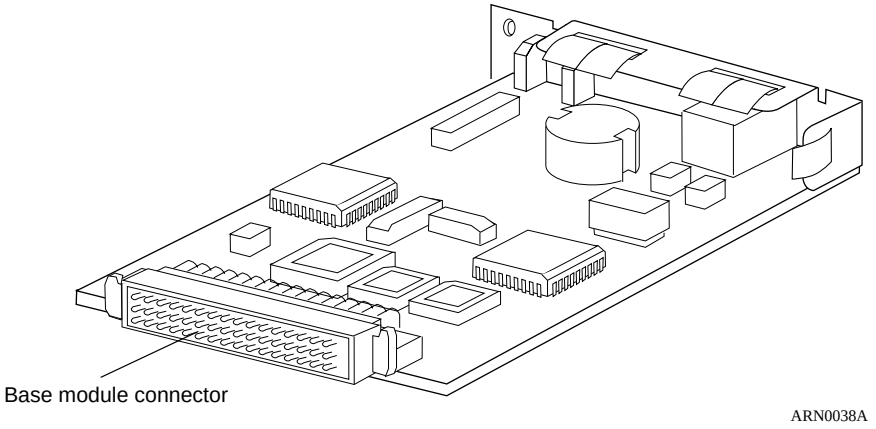


Figure 2-6. WAN Adapter Module

In this guide, the term *WAN adapter module* refers to the following modules:

- Serial (V.35, RS-232, RS-449/442 balanced, RS-530, and X.21)
- ISDN basic rate interface (BRI) U
- ISDN BRI S/T
- T1/fractional T1 DSU/CSU
- E1/fractional E1 DSU/CSU
- 56/64 Kb DSU/CSU
- V.34 modem
- Future supported WAN modules

Note: One ISDN WAN adapter module has two circuits available for you to configure. If you use two ISDN WAN adapter modules in the Passport 2430, one in each WAN adapter slot, there are only three circuits available for you to configure.

Installing a WAN Adapter Module

You can install a WAN adapter module in one or both of the slots labeled 1 and 2 (see Figure 2-7).

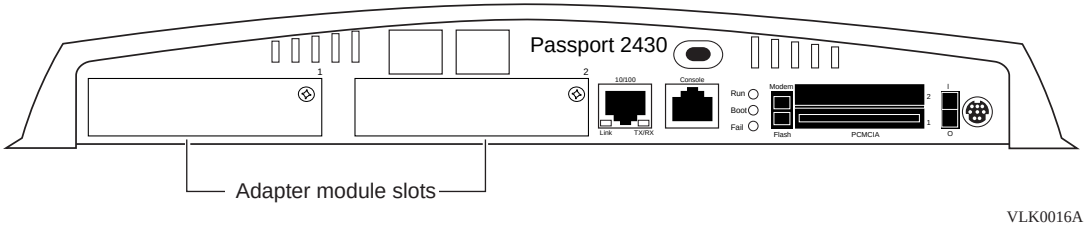


Figure 2-7. Location of Adapter Module 1 and 2 Slots

To install a WAN adapter module the first time:

1. **Attach the antistatic wrist strap.**

   The wrist strap directs static electricity from your body to the chassis of the WAN adapter module, preventing discharge to sensitive electronic components.

Caution: Electrostatic discharge can damage hardware. You must wear the antistatic wrist strap whenever you handle printed circuit boards.

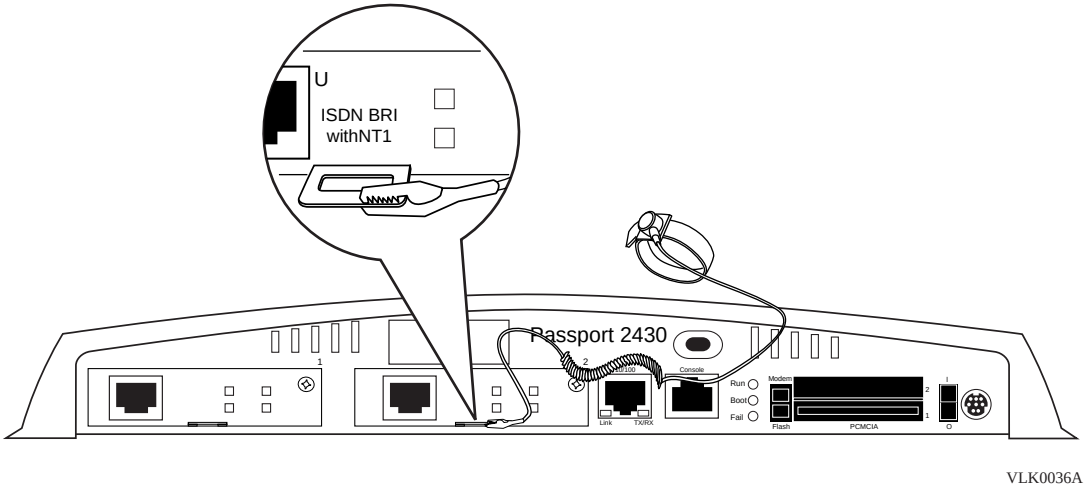
---

   a. **Locate the antistatic wrist strap in the shipping container.**

   b. **Verify that the cable is attached to the wrist strap.**

   c. **Place the strap around your wrist. Adjust the strap to ensure that the metal buckle inside the strap touches your skin.**

   d. **Attach the alligator clip to the metal tab on the WAN adapter module (Figure 2-8).**



VLK0036A

Figure 2-8. Connecting the Wrist Strap Jack to the Metal Tab on a WAN Adapter Module

2. **Remove the filler panel from the WAN adapter module slot of your choice (1 or 2).**

   a. **Using a Phillips screwdriver, remove the screw that secures the filler panel to the 1 or 2 WAN adapter module slot (Figure 2-9).**

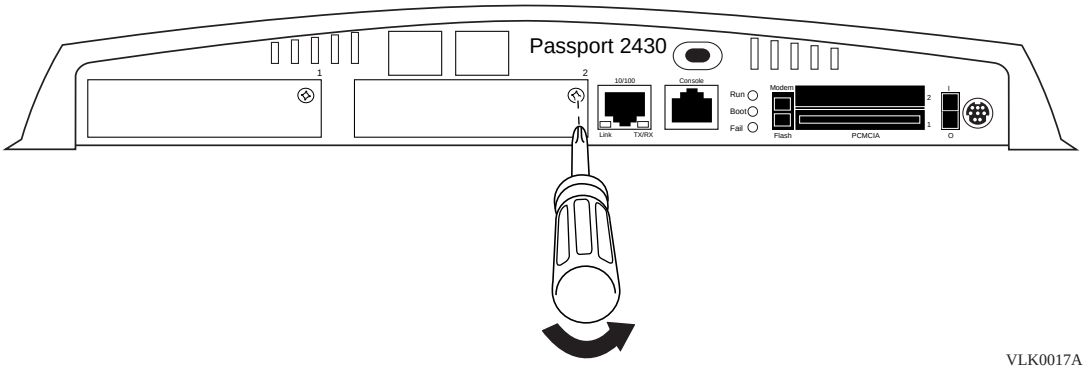


Figure 2-9. Removing the Filler Panel from the 2 WAN Adapter Module Slot

   b. **Grasp the metal tab on the filler panel and pull forward to remove the panel.**

   c. **Set the filler panel aside.**

Note: To operate the Passport 2430 without a WAN adapter module in this slot, you must reinstall the filler panel.

3. **Hold the WAN adapter module with the components facing up (Figure 2-10).**

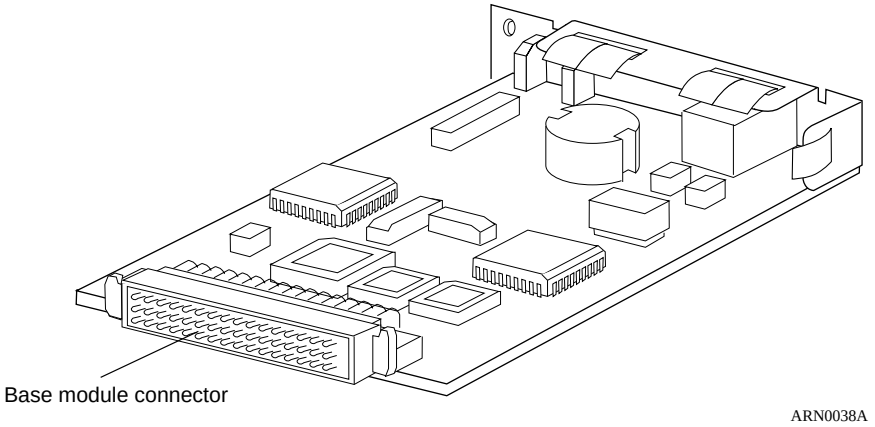


Figure 2-10. WAN Adapter Module Ready for Installation

4. **Slide the WAN adapter module into the slot, making sure that the slot guides engage both sides of the WAN adapter module (Figure 2-11).**

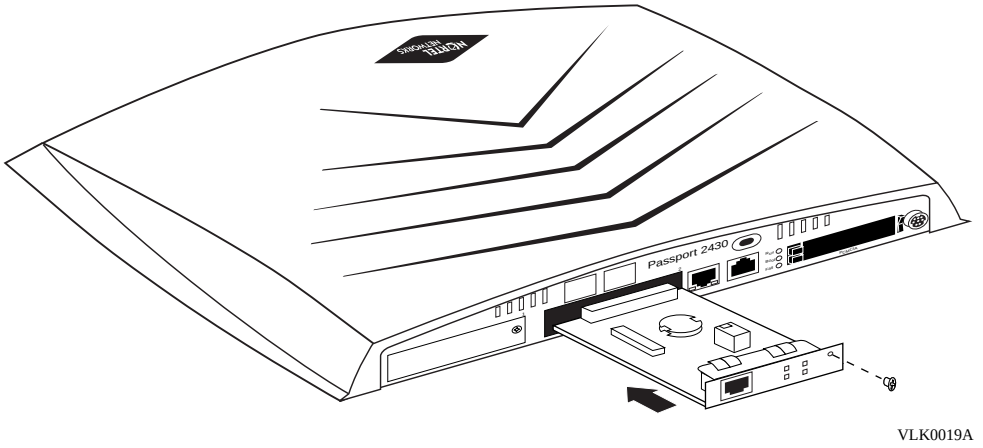


Figure 2-11. Inserting the WAN Adapter Module

5. **Push the WAN adapter module in until the connector pins align with the base module connector socket in the Passport 2430 chassis.**
6. **Using a Phillips screwdriver, insert and tighten the screw (Figure 2-12).**

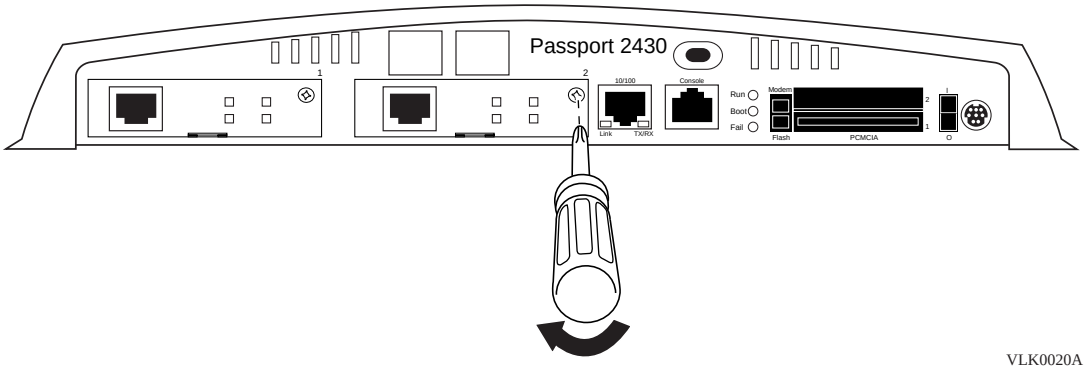


Figure 2-12. Securing the WAN Adapter Module to the Front Panel

7. **Remove the antistatic wrist strap.**
8. **Connect the appropriate WAN cables to the new interface.**

   For cabling information, see the WAN module-specific *Supplement* (that came with your WAN adapter module) and the Nortel Networks *Cable Guide*.

Note: See the WAN module-specific *Supplement* (that came with your WAN adapter module) for information about the LEDs on the newly installed module. The new module's LEDs will not indicate data transfer until you configure and enable software services.

Where to Go Next

Use the following table to determine where you want to go next.

For information about	Go to
Starting the Passport 2430 for the First Time	Chapter 3
Operating the Passport 2430	Chapter 4

Chapter 3
Starting the Passport 2430 for the First Time

This chapter describes how to start the Passport 2430 router.

Topic	Go to
Understanding the Startup Process	3-1
Starting the Passport 2430	3-2
Where to Go Next	3-6

Understanding the Startup Process

To operate, the Passport 2430 requires three files: a software image, a boot ROM image, and a configuration file. Each time that you start the Passport 2430, it loads these files.

- The *software image* contains a group of executable files that support the protocols that the Passport 2430 and the network require. The Passport 2430 uses the software image called *pp2430.exe*.
- The boot ROM image is called *pp2430.ppc*.
- To bridge and route traffic, the Passport 2430 also needs a configuration file that is tailored to the network. A *configuration file* is a binary system file that contains hardware and software configuration data. The default configuration file is named *config*.

Nortel Networks ships the executable and default configuration files on a PCMCIA flash memory card. By default, the Passport 2430 obtains the files from the flash memory card. This procedure is called *booting*.

When you start the Passport 2430 for the first time, it performs diagnostic tests using the files:

- *pp2430ram.exe*, which executes RAM-based diagnostics and loads RAM-based module diagnostic images.
- *pp2430ienet.a*, which tests the 10/100 Ethernet LAN interface.
- *pp2430sdb.a*, which tests the COM1 and COM2 interfaces.

After the diagnostic tests are complete, it attempts to boot using the default configuration file, *config*, and the software image, *pp2430.exe*, stored on the flash memory card. You then create your initial connection to the network by running the Quick-Start script. The Quick-Start script requires a local console connection and the flash memory card shipped with the router.

The Passport 2430 boot process repeats until one of the following events occurs:

- The Passport 2430 boots successfully.
- You turn off the Passport 2430.

The following sections describe how to start the Passport 2430 by first booting it, then using Quick-Start to configure the initial connection to the management console.

Starting the Passport 2430

Before you turn on your router make sure that:

- The flash memory card is installed in the PCMCIA slot 1 (see “PCMCIA Flash Memory Card” on page 2-1).
- The management console is connected to the router (see “Connecting a Management Console” on page 1-20).
- If you are using a PC as your management console, your terminal emulation program is running.

Note: Before starting the boot procedure, ask your network administrator to assist you in completing the Quick-Start worksheets in Appendix B, “Quick-Start Worksheets.”

Accessing a Command-Line Interface

To run the Quick-Start script, you use a command-line interface to access the router software.

To access a command-line interface, you turn on the Passport 2430 and wait for the router to perform the diagnostic tests, then boot locally.

When the Passport 2430 boots, its LEDs flash in a particular order. To ensure that the installation was successful, see "Verifying a Successful Installation" on page 4-4.

After the Passport 2430 boots, the Technician Interface `login` prompt appears.

Running the Quick-Start Script

After the router boots and you access the command-line interface, you engage the Technician Interface. You use the Technician Interface to start the Quick-Start script that creates the router's initial IP interface.

You can also configure additional interfaces using Quick-Start, but in most cases your initial IP interface connects you to the management workstation, where you can use Site Manager, Bay Command Console (BCC™), or another management tool to fully customize your router's configuration.

To engage the Technician Interface, type the following command (noting the use of an uppercase "M") at the login prompt and press the Return key:

Manager

The prompt (`$`) appears. You are now using the Technician Interface.

Note: To check the contents of the router local file system on the installed flash memory card, type **dir** and press the Return key. The *pp2430.exe* software image, *config* file, and the *inst_pp2430.bat* file should appear in the list of files.

To run Quick-Start:

1. **Enter the following command to run the Quick-Start script:**

   run inst_pp2430.bat

   The Quick-Start script begins running.

2. **Respond to the prompts, using your worksheets.**

   Table 3-1 describes the commands that you use to interact with the Quick-Start script.

Table 3-1. Quick-Start Commands

Task	Action	Details
Accept the default value.	Press **Return.**	Your console displays default values in brackets, for example, [E11].
Repeat a step to make a correction.	Press **Control-c.** Press **n**.	When prompted, “Terminate script y/n?” press the **n** key. You return to the beginning of the step so that you can reenter the information.
Stop the Quick-Start installation script.	Press **Control-c**. Press **y**.	When prompted, “Terminate script y/n?” press the **y** key. The procedure is terminated and you return to the Technician Interface prompt. To restart the Quick-Start procedure, you must reboot the router by entering **boot**.

The script prompts you for the following information in the order given:

a. Initial Global Worksheet information

b. Specific protocol information

c. WAN protocol selection

d. Specific protocol information

e. The rest of the Global Worksheet information

After you enter all of the Global Worksheet protocol information, the script displays a configuration summary and prompts you to save the configuration to a file.

3. **Name and save the configuration file.**

   The script begins to test the configuration on the new IP interface (Figure 3-1).

```
Testing local IP interface

ping -IP 192.32.00.000 -r5
IP ping:  192.32.00.000 is alive (size - 16 bytes)
IP ping:  192.32.00.000 is alive (size - 16 bytes)
IP ping:  192.32.00.000 is alive (size - 16 bytes)
IP ping:  192.32.00.000 is alive (size - 16 bytes)
IP ping:  192.32.00.000 is alive (size - 16 bytes)


This test attempts to ping the Site Manager workstation.

NOTE: If routing has not yet converged, an attempt
       to ping the Site Manager workstation may fail.  If
       this happens, you may either enter a new IP address or
       quit and wait a short period of time and try again from
       the TI command line.

Type q<return> to cancel this test.

Enter IP address of Site Manager workstation:
```

Figure 3-1. Starting the IP Interface Test

4. **To continue the IP configuration test, enter the IP address for the Site Manager workstation.**

   To cancel the test, enter **q**.

5. **Choose whether you want to configure another module or port.**

   If you enter **n**, the Technician Interface prompt appears. If you enter **y**, the script prompts you for information about the additional module or port. Return to step 2 of this procedure.

6. **When the Technician Interface prompt reappears, enter logout to exit the Technician Interface.**

After the router creates and tests the configuration, it starts using the configuration information that you entered.

Where to Go Next

Use the following table to determine where you want to go next.

For information about	Go to
Operating the Passport 2430	Chapter 4

Chapter 4
Operating the Passport 2430

This chapter describes how to operate the Passport 2430 router.

Topic	Page
Understanding the LEDs	4-1
Verifying a Successful Installation	4-4
Diagnostic Software	4-5
Turning the Power On and Off	4-8
Replacing a Flash Memory Card	4-9
Protecting Flash Memory Card Files	4-11
Securing the Passport 2430	4-12

Understanding the LEDs

Light emitting diodes (LEDs) on the Passport 2430 and the WAN adapter modules provide information about operating the Passport 2430. The following sections describe LEDs located on the Passport 2430.

Note: For information about LEDs on the WAN adapter modules, see the module-specific *Supplement* that came with the WAN adapter module.

Passport 2430 LEDs

The Passport 2430 has LEDs on the front and on the back panel.

LED on the Front of the Passport 2430

On the front of the Passport 2430 there is an LED (see Figure 4-1) that lights when the router fails.

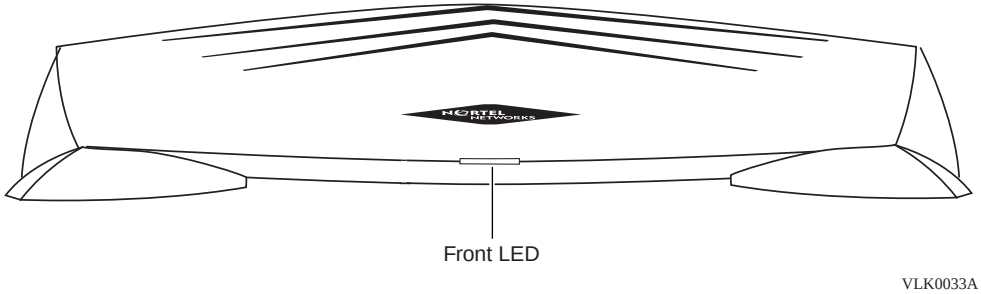


Figure 4-1. LED Located on the Front of the Passport 2430

LEDs on the Back of the Passport 2430

The Passport 2430 has diagnostic and LAN interface LEDs on the back panel as shown in Figure 4-2.

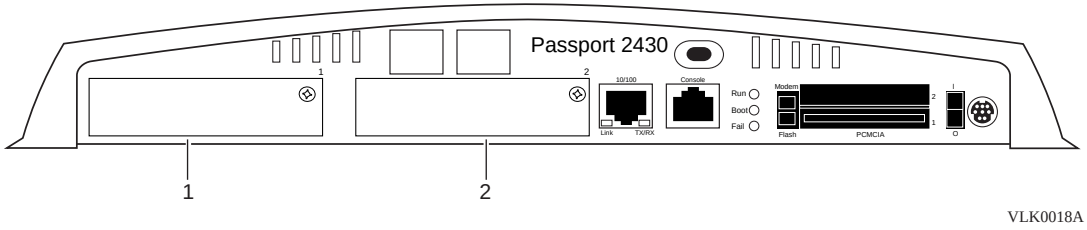


Figure 4-2. LEDs Located on the Back Panel of the Passport 2430

Diagnostic LEDs

The Passport 2430 diagnostic LEDs (Figure 4-3) indicate the status of the router itself.

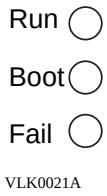


Figure 4-3. Diagnostic LEDs

All of these LEDs light briefly when you turn on the Passport 2430.

Table 4-1 describes what it means when each of the diagnostic LEDs lights.

Table 4-1. Base Module Diagnostic LEDs

LED	Meaning
Boot	Diagnostic tests were successful and the Passport 2430 is booting.
Run	The Passport 2430 is operational.
Fail	Diagnostic tests failed.

LAN Interface LEDs

The LAN interface LEDs are on the bottom left and right corners of the LAN port, which is labeled 10/100.

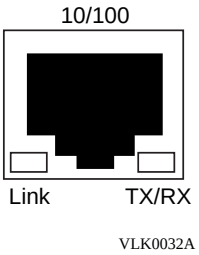


Figure 4-4. LAN Port and Interface LEDs

The Link LED lights when you establish an Ethernet connection.

The TX/RX LED lights when data passes to or from the router.

Verifying a Successful Installation

After connecting the Passport 2430 to the network, you can verify a successful installation by checking the diagnostic LEDs on the back panel of the Passport 2430 (Figure 4-5).

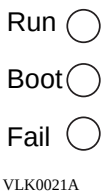


Figure 4-5. Diagnostic LEDs

When you turn on the Passport 2430, the following sequence of back panel LED activity should occur:

- All base module LEDs light momentarily.
- The Run LED lights until the Passport 2430 completes all diagnostic tests.

  If the system fails its diagnostic test, the Fail LED lights.
- After completing the diagnostic testing procedure, the boot process begins. As the Passport 2430 boots, the Boot LED lights and the Run LED is off.

  During the boot process, if the *pp2430.ppc* file is not found, the Boot LED turns off and the Fail LED lights.
- After the boot process completes, the Run LED lights and the Boot LED turns off, indicating that the Passport 2430 is operational.

If the LEDs on the Passport 2430 light in this sequence, you have successfully installed the Passport 2430. Contact your network administrator to verify that the Passport 2430 is now connected to the network.

If you need additional assistance, contact your local Nortel Networks Technical Solutions Center.

Diagnostic Software

Diagnostic software runs a sequence of tests on the Passport 2430 CPU and module hardware. This software runs automatically when you start the Passport 2430 (before booting) or when you enter the following command from the command-line interface:

diags

The following lists each test the software runs in the appropriate order, and explains all possible results of each test.

Table 4-2. Diagnostic Testing

Diagnostic Test	Possible Results

Testing CPU Board	PASSED - diagnostic test proceeds to test the next module.
	FAILED
	• non-bootable failure - There is a problem in the hardware necessary to run the Passport 2430. The software displays the following message:
	`The CPU board FAILED HARDWARE DIAGNOSTICS. This is a non bootable failure. Not Attempting Boot.`
	In the event of a non-bootable failure, the Passport 2430 will not boot.
	• bootable failure - There is a problem in the hardware that is not immediately necessary to run the Passport 2430 (for instance if the LAN port failed). The software displays the following message:
	`The CPU board FAILED HARDWARE DIAGNOSTICS. This is a bootable failure.`
	The software proceeds to test the next module.

(continued)

Table 4-2. Diagnostic Testing

Diagnostic Test	**Possible Results** *(continued)*
Testing SDB Module in Slot 1	PASSED - The WAN adapter module is operational. The software proceeds to test the next module. FAILED - The WAN adapter module is not operational. The software proceeds to test the next module. NOT PRESENT - There is no WAN adapter module in Slot 1. The software proceeds to test the next module.
Testing SDB Module in Slot 2	PASSED - The WAN adapter module is operational. The software starts the bootstrap. FAILED - The WAN adapter module is not operational. This is considered a bootable error; the software starts the bootstrap. NOT PRESENT - The software does not detect a WAN adapter module in Slot 2. The software starts the bootstrap.

If you need assistance, contact your local Nortel Networks Technical Solutions Center.

Enabling and Disabling Diagnostic Software

If you do not want diagnostic testing when the Passport 2430 starts, disable the diagnostic software by entering:

diags-off

The diagnostic testing will not run when you start the Passport 2430.

Note: Although disabling the diagnostic software decreases the start-up time, Nortel Networks recommends that the diagnostic software runs by default when you start the Passport 2430.

To re-enable the diagnostic software, enter:

diags-on

The diagnostic testing now runs when you start the Passport 2430.

Turning the Power On and Off

The power switch is located on the back of the Passport 2430 (Figure 4-6).

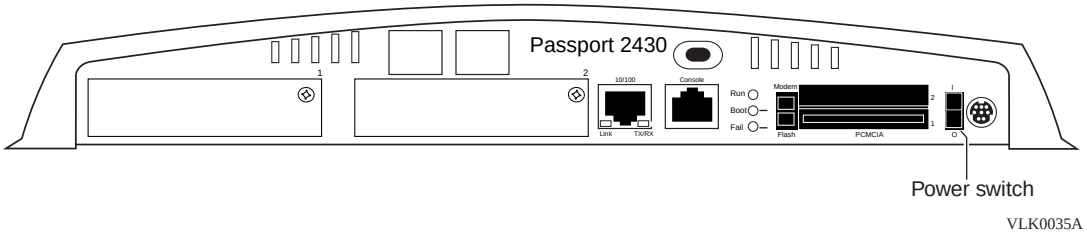


Figure 4-6. Power Switch

To turn on the Passport 2430, press the power switch to the ON (1) position.

The logo on the front lights and the back panel LEDs will step through the sequence described in "Verifying a Successful Installation" on page 4." If the LEDs on the power supply do not light, or the front LED (see Figure 4-1 on page 4-2) and the Fail LED (see Figure 4-5 on page 4-4) remain on, turn the power switch to the OFF position. Wait 1 minute and then turn the power switch to the ON position.

If the Passport 2430 does not turn on, check the power supply cable connections. See "Connecting the External Power Supply" on page 1-24 for information. If the Passport 2430 still does not power on, or the LEDs that indicate failure remain on, contact the Nortel Networks Technical Solutions Center.

Note: When the front logo lights, there may be variation in the lighting or the light may dim. This does not indicate a problem.

To turn off the Passport 2430, press the power switch to the OFF (0) position.

Replacing a Flash Memory Card

To replace a flash memory card in a Passport 2430:

Caution: Do not remove the flash memory card while the router is operating. Removing the flash memory card interferes with current networking operations.

1. **Press the eject button next to the card receptacle on the back panel (Figure 4-7).**

   The card pops out slightly.

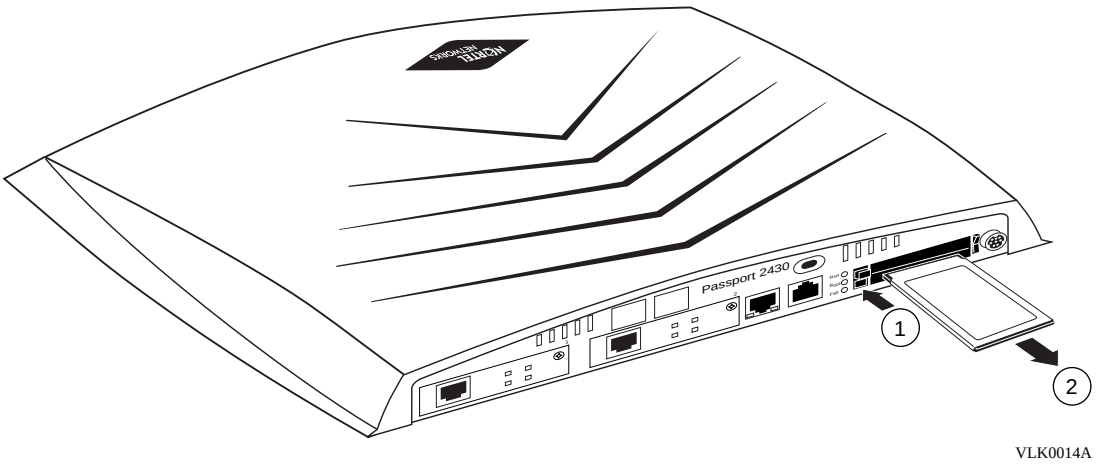


Figure 4-7. Ejecting a Passport 2430 Flash Memory Card

2. **Pull the flash memory card out of the card receptacle.**

Caution: Do not remove the flash memory card while the router is operating. Removing the flash memory card interferes with current networking operations.

To insert another flash memory card into the slot:

1. **Position the card with the label facing up and the INSERT arrow pointing toward the card receptacle.**
2. **Insert the card into the bottom PCMCIA slot (Figure 4-8) and gently push in the card until it fits snugly into place.**

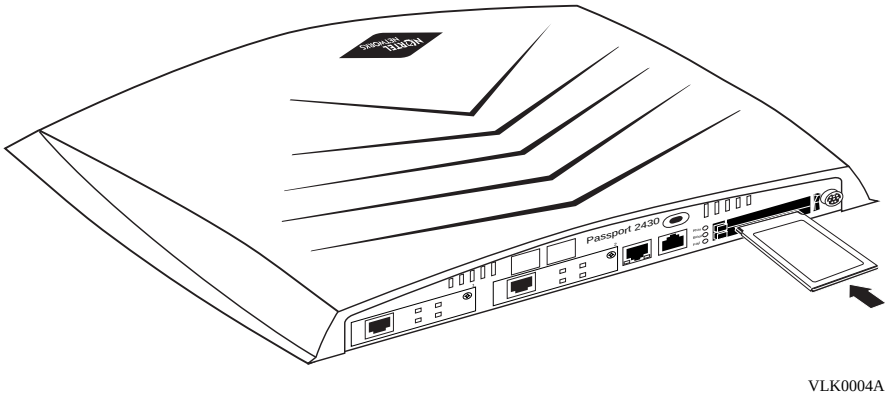


Figure 4-8. Inserting the Flash Memory Card

When you remove a formatted flash memory card, the nonvolatile file system (NVFS) automatically removes access to the card. When you insert and format a card or insert an already formatted card, the NVFS automatically provides access.

Protecting Flash Memory Card Files

Nortel Networks ships each flash memory card with its read/write protect switch in the unprotected position (Figure 4-9). After successfully loading the configuration file and saving your configuration, you may want to write-protect the flash memory card for backup purposes.

Note: You typically do not operate the Passport 2430 with a write-protected flash memory card. You should make a copy of your configuration on another flash memory card, write-protect that card, and store it in a safe place.

To change flash memory card protection:

1. **Remove the flash memory card as described in "Replacing a Flash Memory Card" on page 4-9.**
2. **Adjust the read-write protect switch, which is located on the edge opposite the INSERT arrow of the flash memory card (Figure 4-9).**

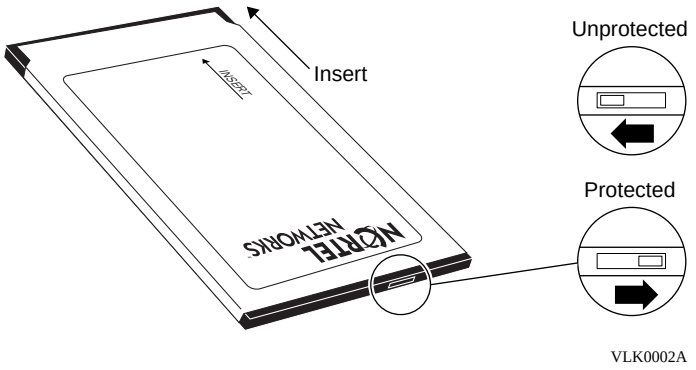


Figure 4-9. Flash Memory Card Read/Write Protect Switch

3. **Reinsert the flash memory card into the card receptacle (refer to Figure 4-8 on page 4-10).**

Securing the Passport 2430

The security slot (Figure 4-10) allows you to use a Kensington lock, or other similar laptop type lock.

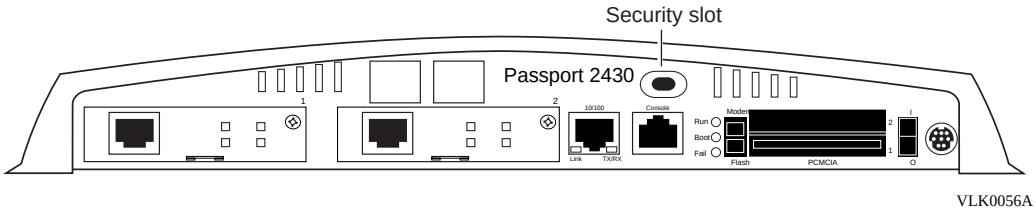


Figure 4-10. Security Slot

Chapter 5
Adding and Replacing a WAN Adapter Module

This chapter describes how to add and replace a WAN adapter module in the Passport 2430.

Before installing the module, examine the contents of your WAN adapter module upgrade kit. If any parts appear damaged, call the Nortel Networks Technical Solutions Center immediately.

Topic	Page
Downloading New Boot and Diagnostic Code	5-1
Preparing to Install the WAN Adapter Module	5-2
Installing a WAN Adapter Module	5-6

Note: This chapter provides generic instructions that apply to all Passport 2430 WAN adapter modules. For specific information about the module that you are installing, refer to the module-specific *Supplement*, which ships in the WAN adapter module upgrade kit.

Downloading New Boot and Diagnostic Code

If you are installing a WAN adapter module as an upgrade to your existing hardware configuration, you must verify that the Passport 2430 contains the minimum required version of programmable read-only memory (PROM) code for the module that you are installing. The release media includes the latest boot and diagnostic code at the time it is shipped, but if your upgrade requires newer code, you must manually download the boot images to the memory flash card and the diagnostic images to the diagnostic PROM.

To determine which version of boot and diagnostic code you need when installing a particular WAN adapter module, see the module-specific *Supplement* that ships with the module. For instructions on how to upgrade the PROM code in flash memory, refer to *Upgrading Routers to BayRS Version 14.xx*.

Preparing to Install the WAN Adapter Module

Before installing a WAN adapter module:

1. **Turn off the Passport 2430.**

   Set the power switch on the power supply to off, 0 (see "Turning the Power On and Off" on page 4-8).

Warning: You *cannot* hot-swap Passport 2430 WAN adapter modules.

---

2. **Attach an antistatic wrist strap.**

   The wrist strap directs static electricity from your body to the chassis of the WAN adapter module, preventing discharge to sensitive electronic components.

Caution: Electrostatic discharge can damage hardware. You must wear the antistatic wrist strap whenever you handle printed circuit boards.

---

   a. **Locate the antistatic wrist strap in the shipping container.**

   b. **Verify that the cable is attached to the wrist strap.**

   c. **Place the strap around your wrist. Adjust the strap to ensure that the metal buckle inside the strap touches your skin.**

   d. **Attach the alligator clip to the metal tab on the WAN adapter module (Figure 5-1).**

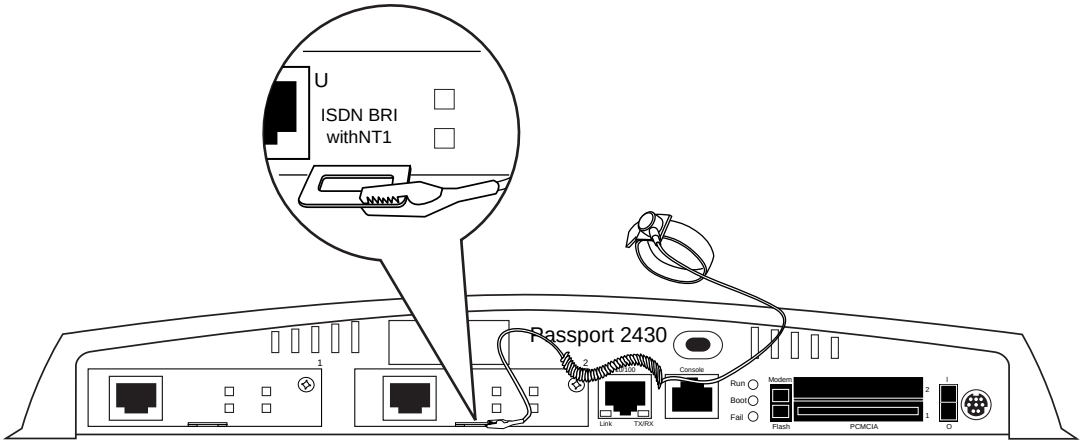


Figure 5-1. Connecting the Wrist Strap Jack to the Metal Tab on a WAN Adapter Module

3. **Remove the installed WAN adapter module or the slot filler panel from either 1 or 2 (see Figure 5-2).**

   - To install the WAN adapter module in an empty slot, go to "Removing the Filler Panel" on page 5-4.
   - To replace an installed WAN adapter module, go to "Removing a WAN Adapter Module."

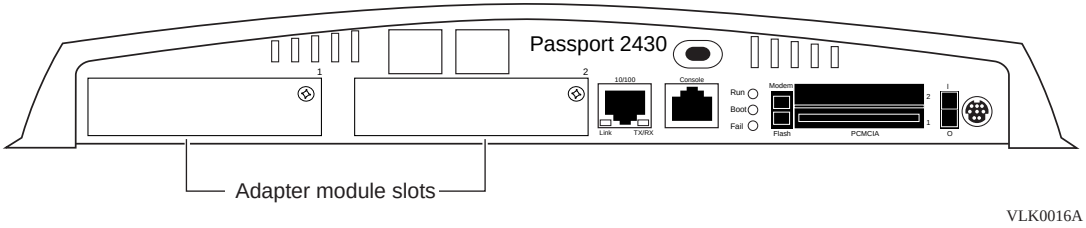


Figure 5-2. Location of the WAN Adapter Module 1 and 2 Slots

Removing the Filler Panel

Remove the filler panel from the empty WAN adapter module slot:

1. **Using a Phillips screwdriver, remove the screw that secures the filler panel in the slot labeled either 1 or 2 (Figure 5-3).**

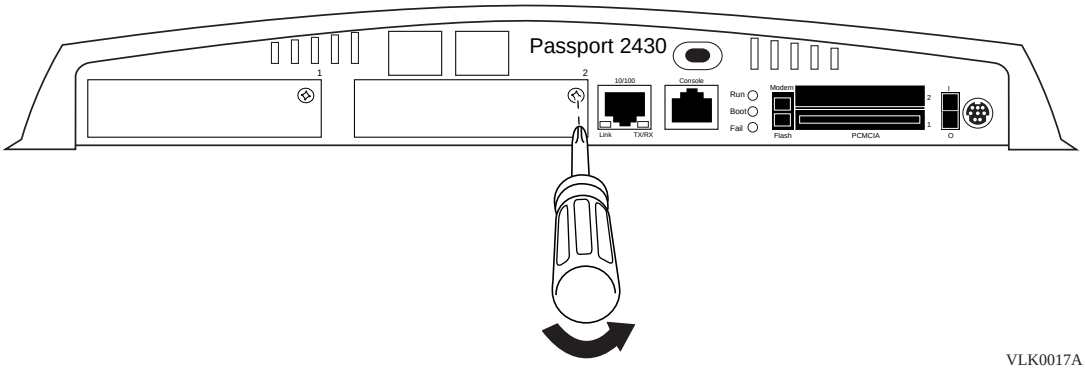


Figure 5-3. Removing the Filler Panel from the 2 Slot

2. **Grasp the metal tab on the filler panel and pull forward to remove the panel.**
3. **Set the filler panel aside.**

Note: To operate the Passport 2430 without a WAN adapter module in this slot, you must reinstall the filler panel.

4. **Go to "Installing a WAN Adapter Module" on page 5-6.**

Removing a WAN Adapter Module

To remove a WAN adapter module:

1. **Using a Phillips screwdriver, remove the screw that secures the WAN adapter module that you want to replace (Figure 5-4).**

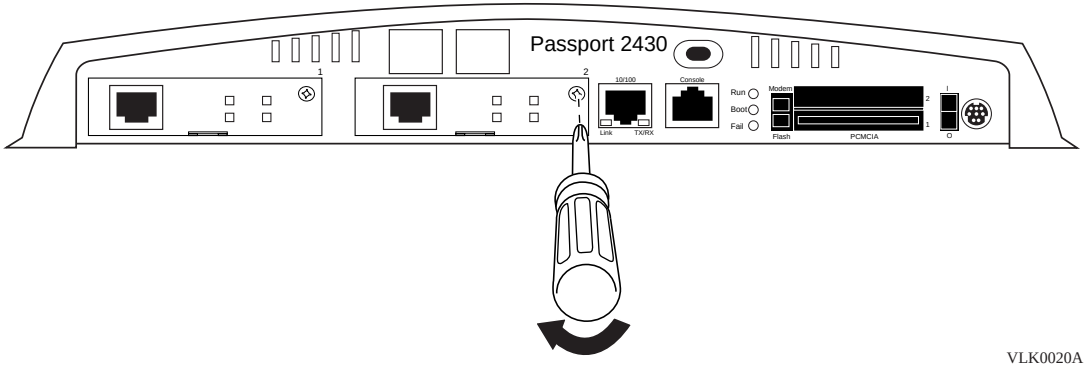


Figure 5-4. Removing the WAN Adapter Module Screw

2. **Pull the WAN adapter module toward you to detach it from the base module connector in the Passport 2430 chassis.**

   Grasp the WAN adapter module's metal tab, or insert a thin tool (such as a flat-tip screwdriver) in the slot on the tab.

   Be prepared to apply some force, but stop pulling immediately as soon as the WAN adapter module is free from the base module connector.

3. **Slide the WAN adapter module all the way out of the slot.**
4. **Place the WAN adapter module in an antistatic bag.**
5. **Go to the next section, "Installing a WAN Adapter Module."**

Installing a WAN Adapter Module

To install a WAN adapter module:

1. **Hold the WAN adapter module with the components facing up (Figure 5-5).**

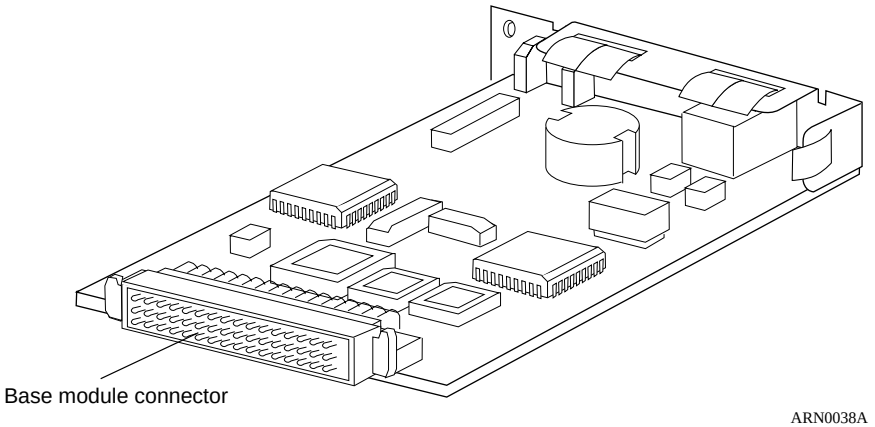


Figure 5-5. WAN Adapter Module Ready for Installation

2. **Slide the WAN adapter module into the slot, making sure that the slot guides engage both sides of the WAN adapter module (Figure 5-6).**

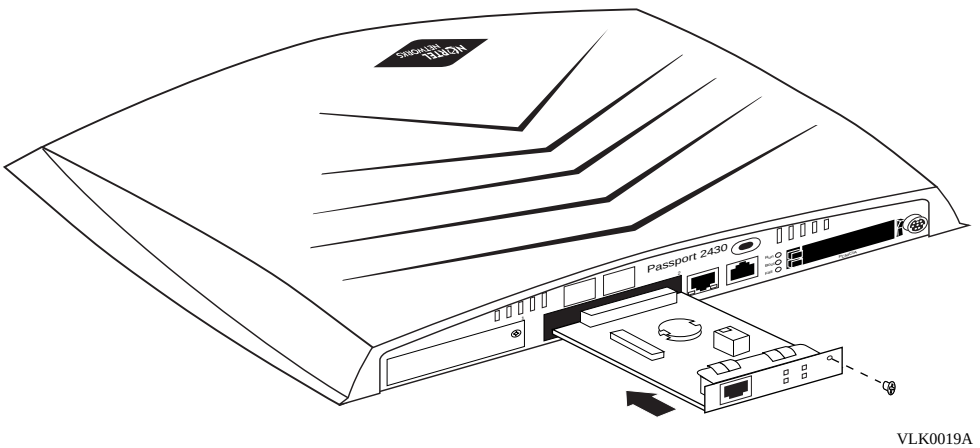


Figure 5-6. Inserting the WAN Adapter Module

3. **Push the WAN adapter module in until its connector pins align with the base module connector socket in the Passport 2430 chassis.**
4. **Using a Phillips screwdriver, insert and tighten the screw (Figure 5-7).**

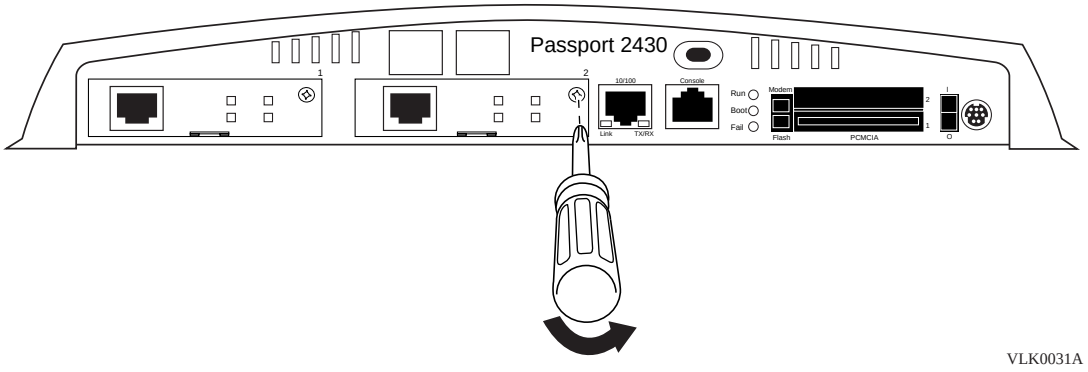


Figure 5-7. Securing the WAN Adapter Module to the Back Panel

5. **Remove the antistatic wrist strap.**
6. **Connect the appropriate WAN cables to the new interface.**

   For cabling information, see the module-specific *Supplement* that came with the WAN adapter module and the Nortel Networks *Cable Guide*.

Before you can use the WAN adapter module after installation, you must start the router on the network and modify its configuration file to include the new interface.

See the module-specific *Supplement* that came with the WAN adapter module for a list of software installation tasks and related documentation.

Note: Configuring software for additional interfaces may increase the Passport 2430 memory requirements.

7. **Turn the power supply on and check the Passport 2430 LEDs on the back panel (see "Verifying a Successful Installation" on page 4-4).**

Note: See the module-specific *Supplement* that came with the WAN adapter module for information about the LEDs on the newly installed module. The new module's LEDs will not indicate data transfer until you configure and enable software services.

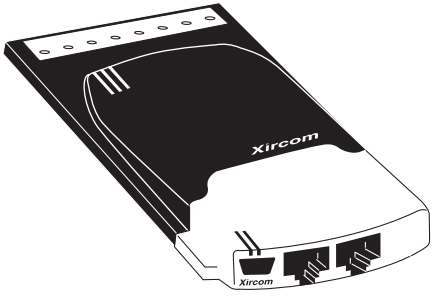
If the WAN module fails its diagnostic test, the Fail LED on the back panel and the front of the Passport 2430 remains on and the WAN module LED flashes rapidly.

Chapter 6
Replacing a PCMCIA Modem Card

This chapter describes how to remove and install a PCMCIA modem card in the Passport 2430 router.

Topic	Page
Removing a Modem Card	6-2
Installing a Modem Card	6-3

A modem installed in the Passport 2430 provides remote access to the system for the administrator. Nortel Networks supports the use of the Xircom RM 56 G (Figure 6-1). This is a Type III, RealPort™ PC card and is capable of modem speeds up to 56 Kb/s.



VLK0003A

Figure 6-1. Xircom RealPort Modem Card

Note: You can also install an Integrated V.34 modem in either WAN adapter slot (COM1 or COM2) for WAN connection and bandwidth-on-demand services. However, you cannot use this modem for remote administration. To install an Integrated V.34 modem, see "Installing a WAN Adapter Module" on page 2-7 or Chapter 5, "Adding and Replacing a WAN Adapter Module."

The next sections describe how to remove and install a PCMCIA modem card. If you are adding a modem card into an empty slot, go directly to "Installing a Modem Card" on page 6-3.

Removing a Modem Card

To remove a modem card from the Passport 2430:

1. **Detach the telephone line from the modem card jack.**
2. **Press the modem button, which is next to PCMCIA slot 2 on the back panel.**

   The card pops out slightly.
3. **Pull the modem card out of the card receptacle (Figure 6-2).**

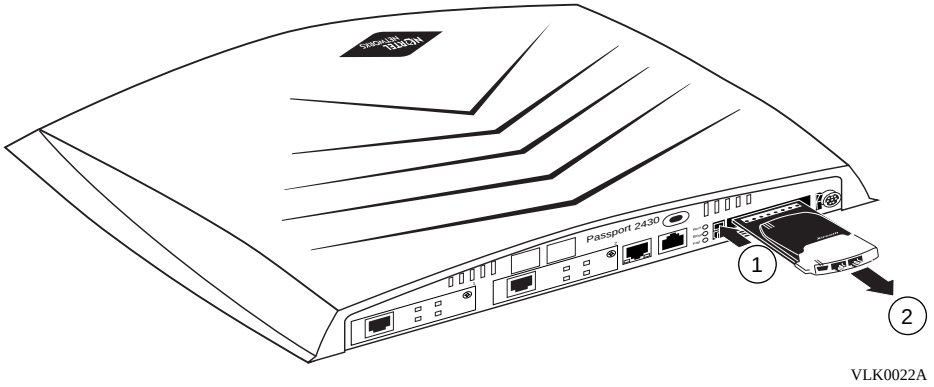


Figure 6-2. Removing a Passport 2430 Modem Card

Installing a Modem Card

To install a modem card:

1. **Position the card pointing toward PCMCIA slot 2.**
2. **Insert the card into the slot and gently push the card in until it fits snugly into place (Figure 6-3).**

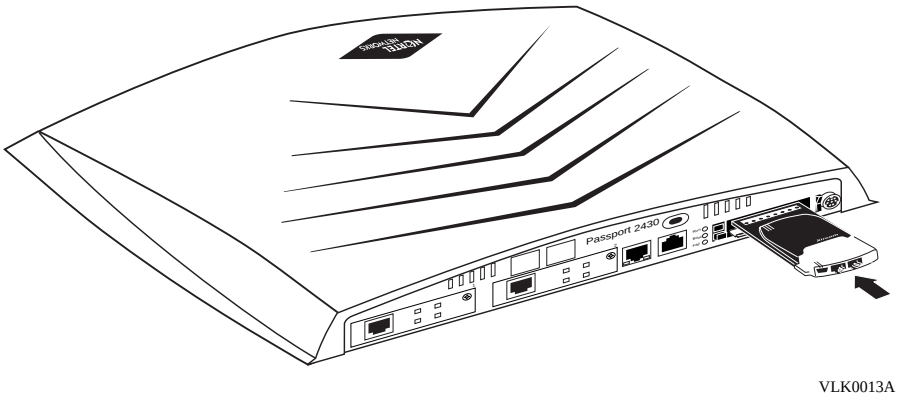


Figure 6-3. Inserting the Modem Card

Note: You can install a modem card only in PCMCIA slot 2. The modem will not work if you install it in PCMCIA slot 1.

3. **Connect the J-11 jack from the telephone line directly to the PCMCIA modem interface (Figure 6-4).**

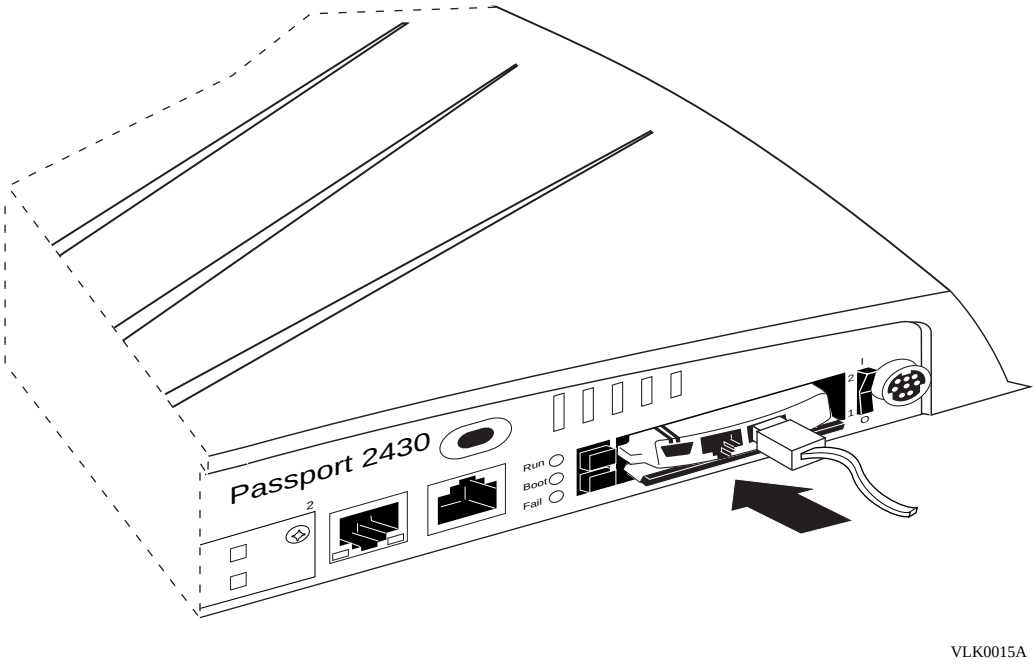


Figure 6-4. Connecting the Telephone Line to the Modem Card

Table 6-1 provides the default settings for the modem card.

Table 6-1. Modem Defaults

Modem Signal/Parameter	Default Value
Auto answer	Answer on two rings with DTR active
Local character echo	Off
Supervisory functions	Off
Baud rate	9600
Data bits	8
Stop bits	1
Parity	None

Modem Card Support

For assistance in diagnosing and resolving any modem problem, contact the Nortel Networks Technical Solutions Center (see “How to Get Help” on page xxi). If the Technical Solutions Center determines that the problem is related to the modem card, rather than the Passport 2430 software, you will need to contact Xircom technical support at the following URL: *http://www.xircom.com.*

Chapter 7
Upgrading Memory

If you want to upgrade your router by adding more memory, you can install a 16 or 32 MB single inline memory module (SIMM). This chapter describes how to replace or install a SIMM in the Passport 2430.

Topic	Page
Installing the SIMM	7-1

Installing the SIMM

You install a SIMM in the Passport 2430 with the following steps:

1. **Turn off the Passport 2430.**
2. **Take the cover off the chassis.**
3. **Insert the SIMM into the SIMM slot.**
4. **Replace the cover of the chassis.**
5. **Turn on the Passport 2430.**

The following sections explain each step in greater detail.

Turn Off the Passport 2430

Turn off the Passport 2430:

1. **Press the power switch to the off (0) position (Figure 7-1).**

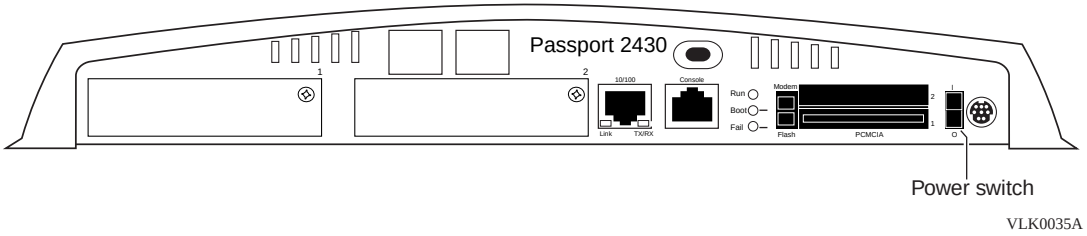


Figure 7-1. Power Switch

2. **Pull the power supply plug out of the wall outlet.**

Remove the Cover from the Chassis

Take the cover off the Passport 2430 chassis:

1. **Turn the Passport 2430 upside down and remove the four screws as shown in Figure 7-2.**

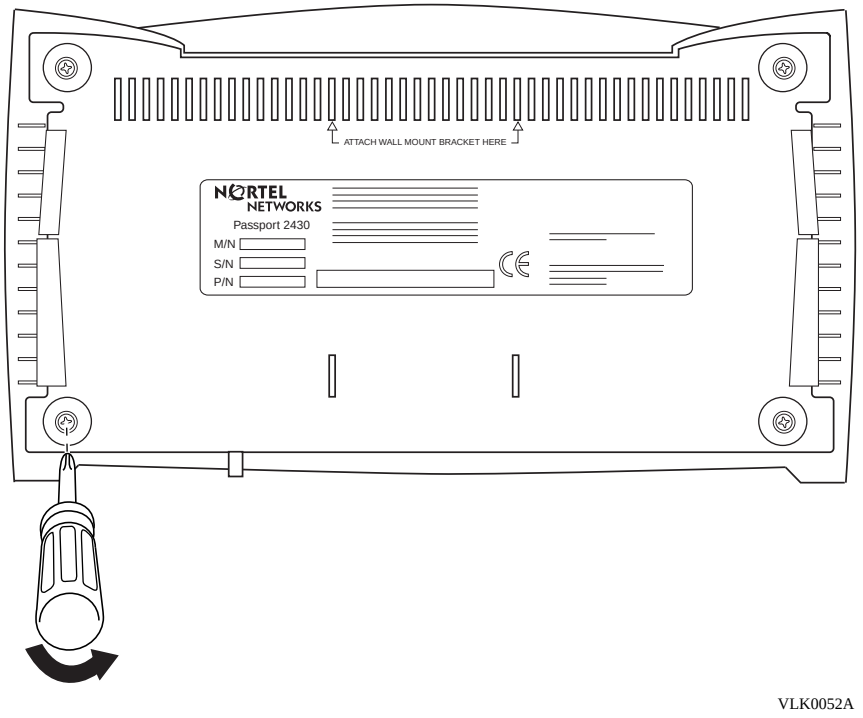


Figure 7-2. Removing the Screws from the Passport 2430

2. **Carefully turn the Passport 2430 rightside up, grasp the cover near the front and pull up and remove as shown in Figure 7-3.**

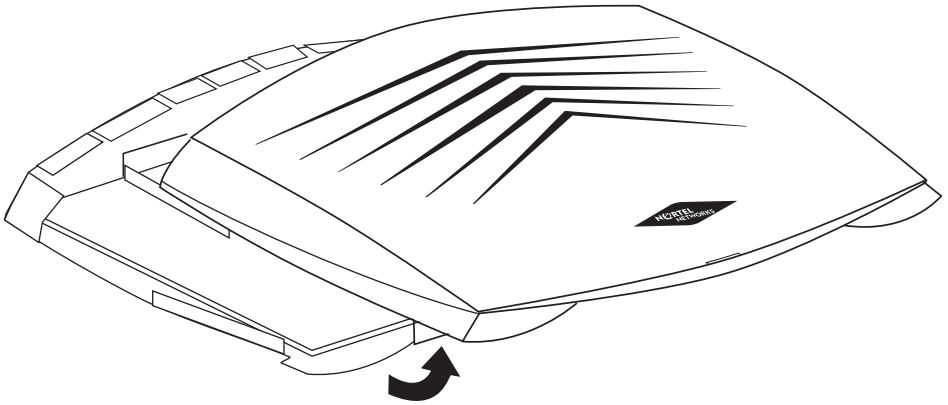


Figure 7-3. Removing the Chassis Cover

3. **Locate the SIMM slot (see Figure 7-4).**

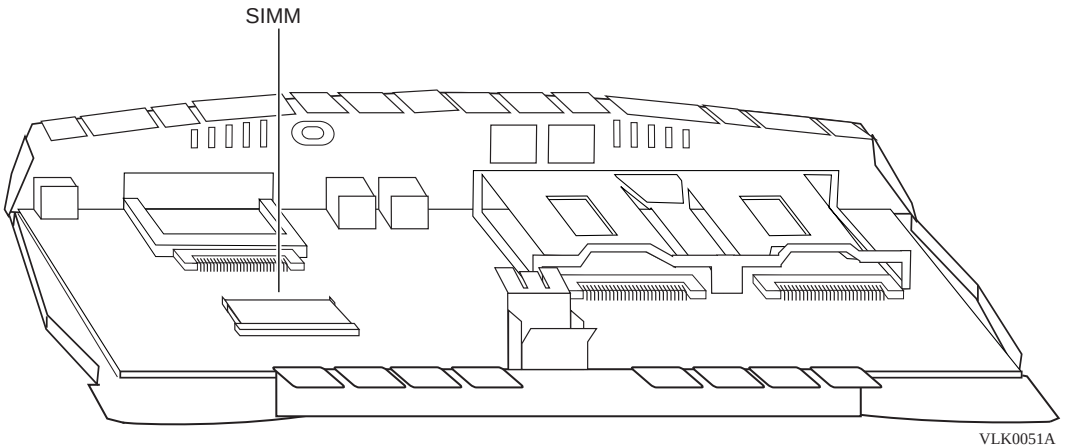


Figure 7-4. Location of the SIMM Slot

If there is already a SIMM in the SIMM slot, go to ""Removing a SIMM" on page 7-5. Otherwise go to **"**"Inserting a SIMM" on page 7-6**.**

Removing a SIMM

To remove a SIMM currently in the Passport 2430:

1. **Pull the tabs on either side of the SIMM as shown in Figure 7-5.**

   The SIMM will pop up.

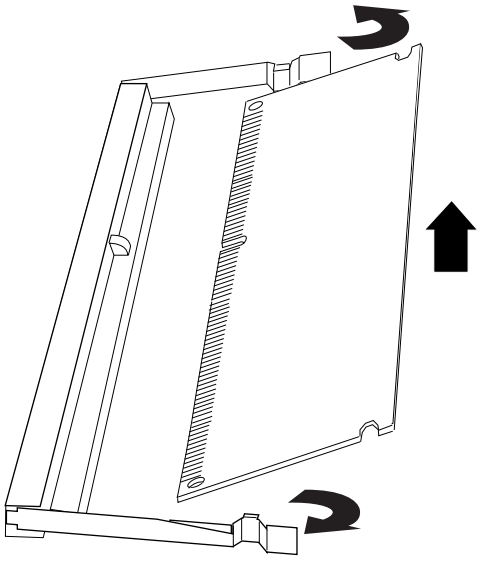


Figure 7-5. Pull the Tabs on Either Side of the SIMM

2. **Grasp the SIMM and pull as shown in Figure 7-5.**

Inserting a SIMM

To insert the SIMM:

1. **Position the SIMM so that the notch on the SIMM lines up with the socket key on the SIMM slot.**
2. **Gently push the SIMM into the slot (see Figure 7-6).**

   When in place, the SIMM pops-up.

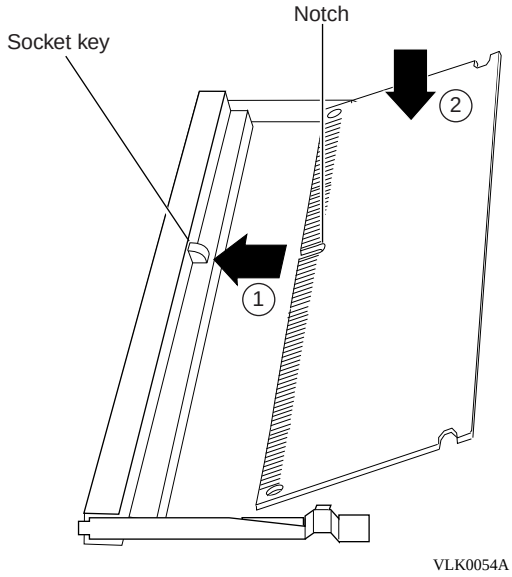


Figure 7-6. Position and Insert the SIMM (1), then Push the SIMM Down (2)

3. **Push the SIMM down until you hear or feel a click (see Figure 7-6).**

Replacing the Chassis Cover

After you install the SIMM, replace the chassis cover:

1. **Lining up the back of the cover and the slots on the back of the chassis, fit the cover back on the chassis as shown in Figure 7-7.**

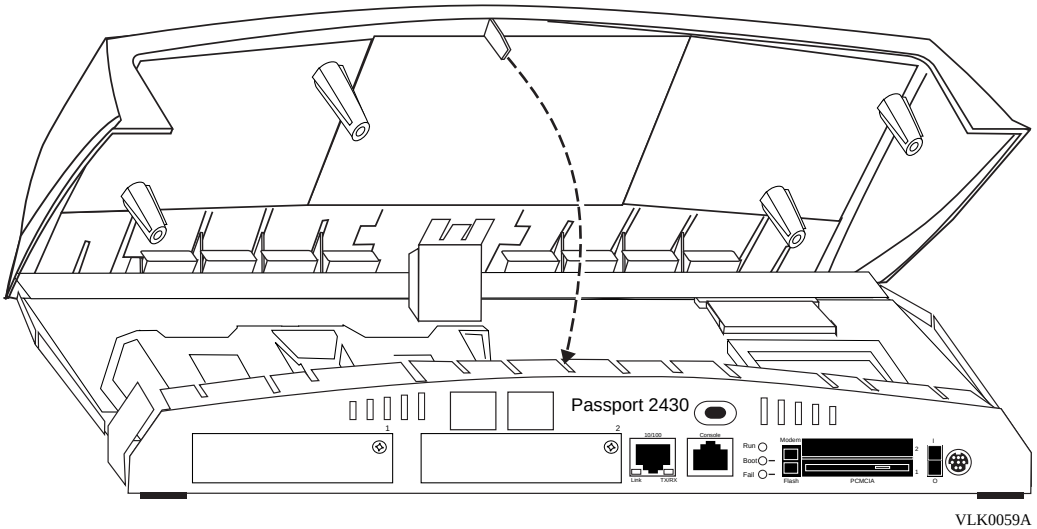


Figure 7-7. Replacing the Chassis Cover

2. **Turn the Passport 2430 upside down and replace the four screws.**

Starting the Passport 2430

After you install the SIMM and replace the chassis cover, start the Passport 2430:

1. **Plug the power supply cord into the wall outlet.**
2. **Press the power switch to the on (1) position.**

The Passport 2430 automatically finds and configures for the SIMM when it boots.

Appendix A
Passport 2430 Technical Specifications

This appendix provides technical specifications and a product overview of the Passport 2430 and its interface options.

Topic	Page
Physical Specifications	A-1
Electrical Specifications	A-3
Environmental Specifications	A-3
Hardware Communications Options	A-4

Physical Specifications

The dimensions and weight of the Passport 2430 are:

- Height: 2.1 in. (5.4 cm)
- Width: 14.4 in. (36.7 cm)
- Depth: 8.0 in. (20.3 cm)
- Weight: 3.5 lb (1.4 kg)

The Passport 2430 has an external power supply. The physical specifications for the power supply are:

- Height: 1.4 in. (3.6 cm)
- Width: 2.6 in. (5.1 cm)
- Length: 6.0 in. (15.2 cm)
- Weight: 1 lb (0.4 kg) maximum
- Cable: 6.5 in. (16.5 cm)

Your installation site must provide two inches of free space above the Passport 2430 to dissipate heat. Minimum space requirements for installing the Passport 2430 at your site are:

- Height: 3.4 in. (8.6 cm)
- Width: 14.4 in. (36.7 cm)
- Depth: 8.0 in. (20.3 cm)

Note: The minimum space requirements assume the external power supply is on a separate area, but within 6.5 inches (16.51 cm) of the Passport 2430 power connector.

The power supply must be installed as follows:

- Proximity to Passport 2430: within 6.5 in. (16.5 cm)
- Proximity to the wall receptacle: 6 ft (2 m)

If you are installing the Passport 2430 in an equipment rack, make sure that the rack meets the following specifications:

- Heavy-duty steel construction
- Electronic Industries Association (EIA) standard hole-spacing
- Width of 19 in. (48 cm)
- Depth of 24 in. (61 cm)

Electrical Specifications

Your installation site must meet the following power requirements:

- Proximity to power outlet: within 6 ft (2 m) of the power supply
- Voltage: 120 to 240 VAC
- Amperage: 0.6 A

Table A-1 lists the wall outlet requirements.

Table A-1. Passport 2430 Power Outlet Requirements

Country	Outlet	Voltage
United States/ Canada	National Electrical Manufacturers Association (NEMA) 5-15P standard outlet	100-120 V
Any other country	Your Passport 2430 distributor informs you of the outlet you need	200-240 V

Environmental Specifications

The environmental requirements for the Passport 2430 are as follows:

- Altitude: 0 to 8000 ft (0 to 2438.4 m)
- Humidity: 10% to 90%, noncondensing
- Temperature: 32° to 104°F (0° to 40°C)

The environmental requirements for the Passport 2430 power supply are as follows:

- Altitude: 0 to 10,000 ft (0 to 3,048 m)
- Humidity: 5% to 85% at 104°F (40°C)
- Temperature: 32° to 104°F (0° to 40°C)

Hardware Communications Options

Passport 2430 connects to an Ethernet LAN and supports the following WAN adapter modules:

- One serial interface
- One ISDN BRI S/T interface
- One ISDN BRI U interface
- One V.34 modem interface
- One 56/64K DSU/CSU interface
- One E1/fractional E1 DSU/CSU interface
- One T1/fractional T1 DSU/CSU interface

Table A-2 describes each interface.

Table A-2. Network Interfaces Available on the Passport 2430

Network Interface	Description
Ethernet	Supports the Ethernet and IEEE 802.3 standards that provide LAN connectivity. The Ethernet interface on the base module is a 10/100BASE-TX. 10/100BASE-TX interfaces provide broadband, baseband, and fiber support, depending on the transceiver and cables that you use.
Serial	Provides WAN connectivity. Passport 2430 models have one or two serial ports, one on each WAN adapter module. Each port operates independently with RS-232, RS-422, RS-449, RS-530, V.28, V.35, and X.21 cables. Serial capability allows internal or external clocking.
ISDN BRI	Supports an S/T or U interface. The BRI provides two B channels and supports full D-channel signaling and call setup/teardown as defined in 1988 CCITT (now ITU-T) Q.921 and Q.931. For more information on ISDN, functional groups, or reference points, see *Configuring Dial Services*. The ISDN BRI option is available as a WAN adapter module for any Passport 2430 model.

(continued)

Table A-2. Network Interfaces Available on the Passport 2430 *(continued)*

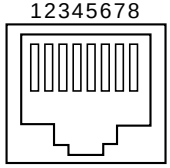
Network Interface	Description
56/64K DSU/CSU	Supports a 56/64K DSU/CSU interface.
FT1/T1 and FE1/E1 DSU/CSU	Provides an interface to convert incoming packet data from an external T1 or E1 line (using an RJ-48C connector). Because the interface integrates the channel service unit (CSU) function on each T1 or E1 port, it allows direct connection to the network. A T1 port can transmit or receive a total of 24 DS0 HDLC channels for each DS1 frame.
V.34 modem	Provides a V.34 modem interface.

Ethernet 10/100BASE-TX Interface

Note: For the proper cable pin assignments to use for each interface type, see the Nortel Networks *Cable Guide*.

The Passport 2430 base module has a Level One LXT907A Ethernet transceiver, which is a dual-speed (10/100) Fast Ethernet port. Table A-3 identifies the pin assignments for this interface.

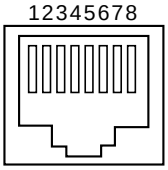
Table A-3. 10/100BASE-TX Interface Pin Assignments

Pin Assignment	Pin No.	Signal (Function)
	1	TD+ (Transmit to UTP wire)
	2	TD- (Transmit to UTP wire)
	3	RD+ (Receive from UTP wire)
	4	Not used
	5	Not used
	6	RD- (Receive from UTP wire)
	7	Not used
	8	Not used

Serial Interfaces

The Passport 2430 base module has internal and external UART connectors. The external UART connector (the console port) uses a 9-pin D-sub connector (Table A-4).

Table A-4. Local Console Port RJ-45 Pin Assignments

Pin Assignment	Pin No.	Signal Name
	1	CTS
	2	DSR
	3	RXD
	4	DCD
	5	TXD
	6	Ground
	7	DTR
	8	RTS

Appendix B
Quick-Start Worksheets

This appendix provides information and worksheets that aid you in responding to the Quick-Start prompts that occur when you configure the Passport 2430 after booting for the first time.

Topic	Page
Understanding Quick-Start Connector Names and Numbers	B-2
Filling Out the Worksheets	B-2
Global Information Worksheet	B-3
Router Protocol Worksheets	B-5
WAN Protocol Worksheets	B-11

You can also configure additional interfaces using Quick-Start, but in most cases your initial IP interface connects you to the management workstation, where you can use Site Manager, BCC, or another management tool to fully customize your router's configuration.

Fill out the worksheets with assistance from your network administrator. The worksheets contain options that appear at each prompt when configuring a serial interface, and space for you to enter your own information. If you are configuring an interface other than the serial interface, the prompts will differ from those shown in the sample worksheets. In that case, use the sample worksheets only as a guide and review the actual Quick-Start prompts and options carefully before replying.

Be sure to fill out the worksheets and read all sections of this appendix before you run the Quick-Start script.

Understanding Quick-Start Connector Names and Numbers

The Quick-Start script assigns a name and number to the LAN and two WAN interfaces, depending on their location on the Passport 2430.

Table B-1 provides the appropriate connector names and numbers that you use to configure an interface during the Quick-Start procedure.

Table B-1. Quick-Start Connector Names and Numbers

	Module		
Interface*	**Base**	**Adapter 1**	**Adapter 2**
Ethernet	XCVR1	N/A	N/A
Serial	N/A	COM1	COM2
56/64K, T1/FT1, or E1/FE1 DSU/CSU	N/A	COM1	COM2

* The Quick-Start script does not support initial ISDN or V.34 interface configuration.

Filling Out the Worksheets

The *inst_pp2430.bat* script provides many options for configuring the Passport 2430 on a network. Because typical remote access uses a serial interface over a wide area connection, this sample describes only the options involved with a serial configuration.

Note: This section provides worksheets only for a serial interface configuration over a wide area connection. It does not contain worksheets for LAN configuration options. If you are configuring a LAN interface, read the Quick-Start text and prompts carefully before responding.

We suggest the following procedure when you fill out the worksheets:

1. **Fill out the Global Information Worksheet completely.**

   The sample worksheet lists options common to all serial interface configurations.

2. **After you record your protocol selections on the Global Information Worksheet, fill out one Routing Protocol worksheet.**

This worksheet lists specific options for RIP, OSPF, and static route configurations. For example, if you select RIP as your routing protocol, you need to fill out only the worksheet pertaining to RIP.

3. **Fill out one WAN Protocol worksheet.**

   This worksheet lists specific options for Nortel Networks (proprietary) Point-to-Point Protocol (PPP), frame relay, Standard PPP, and Switched Multimegabit Data Service (SMDS) configurations. For example, if you select frame relay as your wide area protocol, you need to fill out only the frame relay worksheet.

Global Information Worksheet

This worksheet profiles the prompts and possible options relating to all Passport 2430 serial configurations. Write your selection in the "Your Response" column.

Global Information Worksheet

Step	Requested Information	Options	Your Response
1	Enter the module number [1]:	The script lists the available modules that you can use to connect the router's IP network interface to Site Manager. For example, the script might offer the following options: 1. 10/100 BASE-TX Ethernet on Base Module 2. Serial on Adapter Module 1	Enter the number that corresponds to the module that you want to use.
2	Driver Type:	If there is only one interface on the module you chose, the script automatically selects the driver type for that interface and bypasses this prompt. Otherwise, the script displays a menu of driver types. The actual list depends on the modules that you have installed.	Choose the synchronous driver.

(continued)

Global Information Worksheet *(continued)*

Step	Requested Information	Options	Your Response
	Enter the line speed:	more info needed	
	Enter circuit name [S#]:	The script displays a default circuit name for the COM interface you selected (for example, E11 for COM1 and E12 for COM2).	Press the Return key.
3	Enter IP address in dotted decimal notation:	Enter the IP address for the COM interface.	
	Enter IP subnetwork mask in dotted decimal notation:	Enter the subnet mask for the COM interface IP address.	
	Is the router connected to the same local area network as the Site Manager workstation? (y/n) [n]:	y(es) n(o)	Press the Return key.
	Enter routing protocol number [1]:	1. RIP 2. OSPF 3. Static Route to Site Manager	(Complete the worksheet for the protocol that you select.)
	Enter wide area protocol number [1]:	1. Bay Networks Point-to-Point Protocol (Proprietary) 2. Frame relay 3. Point-to-Point Protocol (PPP) Standard 4. Switched Multimegabit Data Service (SMDS)	(Complete the worksheet for the protocol that you select.)
	Do you wish to set SNMP community management? (y/n) [n]:	y(es) n(o) Setting up SNMP community management is optional.	
4	Enter (TFTP) volume number [1]:	The script automatically selects “1” as the TFTP default volume.	
5	Do you want to enable FTP? (y/n) [n]:	y(es) n(o) Enabling FTP is optional.	

(continued)

Global Information Worksheet *(continued)*

Step	Requested Information	Options	Your Response
	Enter (FTP) volume number [1]:	The script automatically selects "1" as the FTP default volume.	
6	Do you want to enable TI TELNET? (y/n) [n]:	y(es) n(o) Enabling telnet is optional.	
7	Do you wish to enable HTTP (Web) Server? (y/n) [n]	y(es) n(o) Enabling HTTP Web server is optional.	
8	Do you wish to save this configuration to a file? (y/n) [y]	y(es) n(o)	Press the Return key.
	Enter filename [*startup.cfg*]:	We recommend using the default filename.	Press the Return key.
	Do you wish to set up another port/module? (y/n) [y]	y(es) n(o)	Type **n** and press the Return key.

Router Protocol Worksheets

If Site Manager is not on the same network as Passport 2430, you must configure an IP routing protocol so you can remotely manage the router. The worksheets in this section point you to information that you need to appropriately configure each of the following types of protocols:

- RIP
- OSPF
- Static route

RIP Worksheet

The Router Information Protocol (RIP) is a protocol that uses the number of hops to measure network distance. Complete the following worksheet if you will use RIP to access Site Manager.

RIP Worksheet

Requested Information	Options	Your Response
RIP will listen to a specific route to the network or subnet where Site Manager is located. If you would also like RIP to listen to the default route (0.0.0.0) then answer 'y' below. The default route is useful when no specific route is available in the RIP updates received by this router. Should RIP listen to the default route? (y/n) [n]:	y(es) n(o)	
Specify the version of RIP. The default is to run RIP1. RIP2 runs RIP2 without the automatic aggregation of subnets that RIP1 provides. RIP2_AGGR provides the automatic aggregation of subnets for RIP2. Enter Routing Protocol Number [1]:	1. RIP1 2. RIP2 3. RIP2_AGGR	

OSPF Worksheet

The Open Shortest Path First (OSPF) protocol uses the link state to determine the shortest path to the destination. Complete the following worksheet if you will use an OSPF Route to access Site Manager.

OSPF Worksheet

Requested Information	Options	Your Response
Enter OSPF router ID in dotted decimal notation:	Enter an IP address to uniquely identify the router in the OSPF domain. The router provides the IP address of the COM port. We recommend using the default IP address.	
Enter the OSPF area ID in dotted decimal notation [0.0.0.0]:	Enter the area ID. This ID must match the area ID of the router's neighbor. **Note:** The backbone area ID is always 0.0.0.0.	
Enable Simple Password authentication? (y/n) [n]:	y(es) n(o) **Note:** If you answer y(es), the router requests a password.	Password: _____
Follow default paths for unknown subnets? (y/n) [n]:	y(es) n(o)	
Enter OSPF MTU size selection [1]:	1. Default 2. Ethernet size (Nortel Networks Series 5 compatible) 3. User Defined MTU	

(continued)

OSPF Worksheet *(continued)*

Requested Information	Options	Your Response
Enter OSPF interface type selection [1]:	1. Broadcast 2. NBMA 3. Point-to-Point 4. Point-to-Multipoint (Proprietary) 5. Point-to-Multipoint (Per OSPF Standard) **Note:** When using a wide area protocol other than Nortel Networks Proprietary PPP, you should select NBMA.	
Enter decimal value in seconds for Hello Interval [10]: **Note:** This value must match all other interfaces in the OSPF area for connection to take place.	The script suggests the following intervals: Broadcast -- 10 seconds Point-to-Point -- 15 seconds NBMA -- 20 seconds Point-to-Multipoint -- 10 seconds	
Enter decimal value in seconds for Router Dead Interval [40]: **Note:** This value must match all other interfaces in the OSPF area for connection to take place.	The script suggests the following intervals: Broadcast -- 40 seconds Point-to-Point -- 60 seconds NBMA -- 80 seconds Point-to-Multipoint (STD) -- 40 seconds	
Enter decimal value for Router Priority [1]: (For Broadcast, NBMA, or Point-to-MultiPoint)	Enter a router priority value. The lower the value (above 0), the higher the priority. **Note:** If you set the router priority to 0, the router is not eligible to become the designated router on this network.	

(continued)

OSPF Worksheet *(continued)*

Requested Information	Options	Your Response
Enter decimal value in seconds for Poll Interval [120]: (For NBMA only)	Enter the largest number of seconds allowed between Hello packets that the router sends to an inactive NBMA neighbor. The router suggests a 120-second interval.	
Enter IP address of neighbor in dotted decimal notation or enter **q** to quit: (For NBMA only)	Enter addresses for all NBMA neighbors that you want the router to communicate with. When you finish entering addresses, enter **q** and press the Return key.	
Enter IP address of neighbor in dotted decimal notation: (For PPP only)	Enter addresses for the PPP neighbor that you want the router to communicate with.	

Static Route Worksheet

A static route is either an explicit route or a default route from the router to the location of the network or subnet on which Site Manager or BCC is located. Complete the following worksheet if you will use a static route to access Site Manager or BCC.

Static Route Worksheet

Requested Information	Options	Your Response
Destination Network [0.0.0.0]:	Enter the gateway address of the destination network. An address of 0.0.0.0 specifies the default route.	
Destination Network Mask [0.0.0.0]:	Enter the subnet mask of the destination network. A mask of 0.0.0.0 specifies the default route.	
Next-Hop Address:	Enter a next-hop address. All static routes require a next-hop address in the same subnet as the initial IP interface.	
Follow the default route for unknown subnets? (y/n) [n]:	y(es) n(o) The default route does not apply for subnets unless you enter **y** at this prompt.	

WAN Protocol Worksheets

The worksheets in this section provide the requested information and possible options relating to WAN protocol choices on the Global Worksheet.

Frame Relay Worksheet

Frame Relay is designed to provide efficient, high-speed frame or packet transmission with minimum delay. Frame Relay uses minimal error detection and relies on higher-level protocols for error control.

If your WAN protocol choice is Frame Relay, fill out the following worksheet:

Frame Relay Worksheet

Requested Information	Options	Your Response
Enter management type [3]:	1. DLCMI None 2. Rev 1 LMI 3. ANSI T1 617D 4. CCITT Annex A 5. LMI Switch 6. Annex D Switch 7. Annex A Switch	
Enter addressing type [4]:	1. ADDR Q.921 2. ADDR Q.922 (MARCH '90) 3. ADDR Q.922 (NOVEMBER '90) 4. ADDR Q.922	
Enter address field length [2]:	2. Two Bytes 3. Three Bytes 4. Four Bytes	
Enter DLCI number [30]: (For DLCMI None, LMI Switch, Annex D Switch, and Annex A Switch only)	Enter the permanent virtual circuit (PVC) number. **Note:** The valid range for the DLCI number is from 16 through 1007.	

PPP Standard Worksheet

Point-to-Point Protocol (PPP) encapsulates common network-layer protocols in specialized Network Control Protocol packets; for example, IP over PPP (IPCP) and IPX over PPP (IPXCP).

If your WAN protocol choice is PPP, fill out the following worksheet:

PPP Standard Worksheet

Requested Information	Options	Your Response
Enter Remote IP address in dotted decimal notation:	Enter the IP address of the peer connection.	
Do you wish to turn on the PPP echo function? (y/n) [n]:	y(es) n(o)	
Enable PAP (Password Authentication Protocol)? (y/n) [n]:	y(es) n(o) **Note:** If you answer y(es), the router requests a PAP ID and password for this interface. If you answer n(o), the router asks whether you want to enable CHAP.	
Enable CHAP (Challenge Handshake Authentication Protocol)? (y/n) [n]:	y(es) n(o) **Note:** If you answer y(es), the router requests a CHAP secret for this interface.	
Does the Remote Peer have PAP authentication enabled? (y/n) [n]:	y(es) n(o) **Note:** If you answer y(es), the router requests the PAP ID and password for the remote interface.	

(continued)

PPP Standard Worksheet *(continued)*

Requested Information	Options	Your Response
Enable the LQR (Link Quality Reporting) Protocol? (y/n) [n]:	y(es) n(o) **Note:** Link Quality Monitoring on a Nortel Networks Series 5 router is not compatible with this feature.	
Enable use of the Remote Peer router's LQR Timer? (y/n) [y]: (For LQR Protocol only)	y(es) n(o) **Note:** If the LQR timer is enabled, the remote peer router maintains its own LQR timer for this interface. When the LQR timer is disabled, the Passport 2430 is responsible for maintaining the timer for this interface.	
Number of seconds (1-120) [3]: (For LQR Protocol only)	Enter the maximum number of seconds between the transmission of LQR packets.	
Enter [inbound] success rate percentage (1-100) [90]:	Enter the minimal acceptable success rate (percentage) of packets transmitted by the peer router and received on this interface over the last five LQR reporting periods.	
Enter [outbound] success rate percentage (1-100) [90]:	Enter the minimal acceptable success rate (percentage) of packets transmitted by this interface and received by the peer router over the last five LQR reporting periods.	

Nortel Networks Proprietary PPP Worksheet

If your WAN protocol choice is Nortel Networks Proprietary PPP, fill out the following worksheet:

Nortel Networks Proprietary PPP Worksheet

Requested Information	Options	Your Response
Enter BofL (Breath of Life) timer value (1-60) [5]:	Enter the maximum amount of time that can elapse between the successful transmission of BofL messages.	
Enter Local Address selection [3]:	1. DCE 2. DTE 3. EXPLICIT **Note:** Reverse local and remote address values when configuring the device at the other end of the circuit. (Exception: When connecting to a Series 5 router that uses DCE/DTE addressing, use the same local address value.)	
Enter Remote Address selection [3]:	1. DCE 2. DTE 3. EXPLICIT **Note:** Reverse local and remote address values when configuring the device at the other end of the circuit. (Exception: When connecting to a Series 5 router that uses DCE/DTE addressing, use the same local address value.)	

SMDS Worksheet

Switched Multimegabit Data Service (SMDS) is a connectionless, high-speed data service offered by most telephone companies that allows LANs to connect across a WAN.

If your WAN protocol choice is SMDS, fill out the following worksheet:

SMDS Worksheet

Requested Information	Options	Your Response
Enter 10-digit individual address:	Enter the individual address assigned to you by your SMDS service provider.	
Enter 10-digit group address:	Enter the group address assigned to you by your SMDS service provider.	
Enter 10-digit arp address:	Enter the Address Resolution Protocol (ARP) address assigned to you by your SMDS service provider.	

Index

Numbers

10/100BASE-TX, pin assignments, A-5

56/64 Kb DSU/CSU WAN adapter module. *See* WAN adapter module

A

accessing a command-line interface, 3-3

acronyms, xix

adapter module, *See* WAN adapter module

antistatic wrist strap, 2-8, 5-2

B

back panel LEDs, 4-2

booting, 3-1

C

cables
- Ethernet LAN, 1-20
- ordering, 1-8
- PC console, 1-20, 1-21
- power supply, 1-24

chassis, installing, 1-3

command-line interface, accessing, 3-3

commands
- dir, 3-3
- logout, 3-6
- Manager, 3-3
- Quick-Start script, 3-4
- run inst_lite.bat, 3-4

components, placement, 1-2

connector names and numbers, Quick-Start script, B-2

console, 1-20

console parameters
- PC, 1-21
- terminal, 1-22

conventions, text, xviii

customer support, xxi

D

data port parameters, 1-21

diagnostic LEDs. *See* LEDs, 4-2

diagnostic test, failure, 5-8

diagnostics
- command, 4-5, 4-7, 4-8
- disable, 4-7
- enable, 4-8
- possible results, 4-6
- running, 4-5

dir command, 3-3

E

E1/fractional E1 WAN adapter module. *See* WAN adapter module

electrical specifications, A-3

environmental specifications, A-3

equipment rack, specifications, A-2

Ethernet pin assignments, A-5

external power supply, 1-24

F

file system, local, 3-3
flash memory card
  describing, 2-1
  inserting, 4-10
  installing first time, 2-1
  protecting, 4-11
  removing, 4-9
  replacing, 4-9
Frame Relay worksheet, B-11
front LEDs, 4-2

G

Global Information worksheet, B-3

H

heat dissipation, requirements for, 1-9, A-2

I

inst_lite.bat file, running, 3-4
installation, verifying, 4-4
installing
  additional equipment needed, 1-8
  chassis, 1-3
    equipment rack, 1-15
    flat surface, 1-9
    wall-mounting, 1-10
  flash memory card, 2-1
  WAN adapter module, 5-6
interfaces, technical specifications, A-4
IP interface, testing during Quick-Start, 3-5
ISDN BRI NT1 WAN adapter module. *See* WAN adapter module
ISDN BRI U WAN adapter module. *See* WAN adapter module

L

LAN interface LEDs, 4-2
LAN, connecting, 1-20
LEDs
  back panel, 4-2
  diagnostic, 4-2
  front, 4-2
  LAN interface, 4-2
  startup sequence, 4-5
  understanding, 4-1
local file system, viewing, 3-3
login prompt for Technician Interface, 3-3
logout command, 3-6

M

management console
  connecting, 1-20
  PC, 1-20
  terminal, 1-22
Manager command, 3-3
memory card. *See* flash memory card
memory, adding, 7-1
modem card
  default settings, 2-6, 6-5
  described, 2-3
  installing, 6-3
  removing, 6-2
modem, V.34. *See* WAN adapter module

N

nonvolatile file system (NVFS), 4-10

O

OSPF worksheet, B-7

P

Passport 2430
- booting, 3-2
- components, location, 1-2
- installing chassis, 1-3
- interfaces, A-4
- operating, 4-1
- securing, 4-12
- technical specifications, A-1
- turning on and off, 4-8

PC Console, connecting, 1-20

PCMCIA flash card. *See* flash memory card

PCMCIA modem card. *See* modem card

physical specifications, A-1

pin assignments
- Ethernet 10/100BASE-TX, A-5

power specifications, A-3

power supply, 1-24, A-1

power switch, 4-8

PPP worksheet, B-12

product support, xxi

publications, hard copy, xx

Q

Quick-Start procedure
- connector names and numbers, B-2
- inst_lite.bat script, 3-4
- running, 3-4
- worksheets, B-1

R

rack-mounting the Passport 2430, 1-15

read/write protect switch, flash memory card, 4-11

RIP worksheet, B-6

router software image, defined, 3-1

run inst_lite.bat commands, 3-4

S

script, Quick-Start, 3-3

security slot, 4-12

Serial WAN adapter module. *See* WAN adapter module

shelf kit, 1-6

shipment contents, 1-3, 1-5

SIMM slot, 7-4

SIMM, installing, 7-1

site requirements, 1-9, A-2

SMDS worksheet, B-15

software image, defined, 3-1

space requirements, A-2

specifications
- electrical, A-3
- environmental, A-3
- Ethernet interface, A-5
- physical, A-1
- serial interface, A-6

starting the Passport 2430
- LED startup sequence, 4-5
- procedure, 3-1

support, Nortel Networks, xxi

switches
- power, 4-8
- read/write on flash memory card, 4-11

T

T1/fractional T1 DSU/CSU WAN adapter. *See* WAN adapter module

technical publications, xx

technical support, xxi

Technician Interface, login prompt, 3-3

terminal console, 1-22

text conventions, xviii

U

upgrading memory, 7-1

V

V.34 modem WAN adapter module. *See* WAN adapter module

verifying installation, 4-4

voltage specifications, A-3

W

wall mount kit, 1-5

wall-mounting the Passport 2430, 1-10

WAN adapter module
- adding, 5-1
- available options, A-4
- described, 2-6
- installing, 2-7, 5-6
- removing, 5-5

WAN Protocol worksheets, B-11

wiring, 1-1

worksheets
- filling out, B-2
- Frame Relay, B-11
- Global Information, B-3
- Nortel Networks Proprietary PPP, B-14
- OSPF, B-7
- PPP, B-12
- RIP, B-6
- SMDS, B-15
- Static Route, B-10
- WAN Protocol, B-11

wrist strap, antistatic, 2-8, 5-2